SERVICE MANUAL

P5271/P5290/P5390W/P5271i

Date	Revise Version	Description
2009.08.17	V1.0	Initial Issue
2009.09.16	V2.0	Add P5271's extended models: P5390W/P5271i

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SI : huhui TSE: Wendy Check: Joanna Approved: Joseph Li

Preface

This manual is applied to P5271/P5290/P5390W/P5271i projection system. The manual gives you a brief description of basic technical information to help in service and maintain the product.

Your customers will appreciate the quick response time when you immediately identify problems that occur with our products. We expect your customers will appreciate the service that you offer them.

This manual is for technicians and people who have an electronic background. Please send the product back to the distributor for repairing and do not attempt to do anything that is complex or is not mentioned in the troubleshooting.

Note: The information found in this manual is subject to change without prior notice. Any subsequent changes made to the data herein will be incorporated in future edition.

P5271/P5290/P5390W/P5271i Service Manual

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Manual Version 2.0

P5271/P5290/P5390W/P5271i Comparison List

Parts \ Models	P5271	P5271i	P5290	P5390W
LVPS	75.8BV01GP01		75.8BV02GP01	
LAMP DRIVER	75.8BW01G002		70.8EP11GR01	70.8CC18GR01
MAIN BOARD MODULE	70.8BV39GR01	70.8BV47GR01	70.8EP09GR01	70.8CC17GR01
ENGINE MODULE	70.8BV42GR01			70.8CC14GR01
DMD	48.8CQ01G003			48.8EJ01G001
BACK COVER MODULE	70.8BV40GR01	70.8BV46GR01	70.8EP10GR01	70.8CC15GR01
LAMP MODULE	SP.8BV01GC01		SP.8EP01GC01	
TOP &LAMP COVER MODULE	70.8BV45GR01			70.8CC16GR01
WIRELESS BOARD	NA	80.8BV07G001	NA	NA

Table of Content

Chapter 1 Introduction

Highlight 1-1

Compatible Mode 1-4

Product Overview 1-8

Chapter 2 Disassembly Process & Assembly Process

Equipment Needed & Product Overview 2-1

Disassemble Lamp Module 2-2

Disassemble Top/Lamp Cover Module 2-3

Disassemble Keypad Board Module 2-4

Disassemble Main Board Top Shielding 2-4

Disassemble Main Board Module 2-5

Disassemble Front Cover Module 2-8

Disassemble System Fan and Color Wheel Module 2-9

Disassemble Engine Module 2-12

Disassemble DMD Chip and DMD Board 2-12

Disassemble Lamp Driver and Speaker 2-13

Disassemble Blower 2-15

Disassemble LVPS Module 2-15

Disassemble Latch and Spring 2-16

Disassemble Bottom Shielding 2-16

Disassemble Elevator 2-17

Disassemble IO Cover 2-18

Rod Adjustment 2-19

Re-write System and Lamp Usage Hour 2-20

Assemble IO Cover 2-21

Assemble Elevator 2-21

Assemble Bottom Shielding 2-22

Assemble Latch and Spring 2-23
Assemble LVPS Module 2-23
Assemble Blower 2-24
Assemble Speaker and Lamp Driver Module 2-24
Assemble DMD Chip and DMD Board 2-26
Assemble Engine Module 2-27
Assemble Color Wheel Module and System Fan Module 2-27
Assemble Front Cover Module 2-30
Assemble Main Board Module 2-31
Assemble Main Board Top Shielding 2-32
Assemble Keypad Board Module 2-33
Assemble Top/Lamp Cover Module 2-34
Assemble Lamp Module 2-35

Chapter 3 Troubleshooting

LED Lighting Message 3-1
Main Procedure 3-2
Beep Sound 3-6

Chapter 4 Function Test & Alignment Procedure

Test Equipment Needed 4-1
Introduction of LAN Cable(only for P5271i) 4-1
Service Mode 4-1
OSD Reset 4-1
Test Condition 4-2
Test Inspection Procedure 4-3
PC Mode 4-4
PC Calibration 4-7
Video Performance 4-8

Optical Performance Measure 4-9
Network Function Test (Only for P5271i) 4-11
Wireless Function Test (Only for P5271i) 4-14
Others 4-17

Chapter 5 Firmware Upgrade

Section 1: System Firmware Upgrade 5-1
Equipment Needed 5-1
DLP Composer Lite Setup Procedure 5-2
Get into FW Download Mode 5-4
USB Driver Upgrade Procedure 5-4
Firmware Upgrade Procedure 5-5
Waveform Download 5-8
Restore Fan Speed 5-8
Section 2: Network/Wireless FirmWare Upgrade 5-10
Equipment Needed 5-10
Network/Wireless FW Upgrade Procedure 5-11
Check FW Version 5-12

Chapter 6 EDID Upgrade

EDID Introduction 6-1
Equipment Needed 6-2
Setup Procedure (VGA IN 1 & VGA IN 2) 6-3
EDID Key-In Procedure (VGA) 6-4
Setup Procedure (DVI & HDMI) 6-6
EDID Key-In Procedure (DVI) 6-7
Un-lock SNID and Default Language Reset 6-9

Appendix A

Exploded Overview I

Appendix B

Serial Number System Definition I

PCBA Code Definition II

Appendix C

RS232 function command summary table I

Chapter 1

Introduction

1-1 Highlight

No	Item	Description
1	Dimensions (W x H x D)	● 340.8 x 119.5 x 260.6 mm
2	Weight	● 4060g (for P5271) ● 4185g (for P5290) ● 4190g (for P5271i) ● 4185g (for P5390W)
3	Tilt Angle	● 7 degree with elevator mechanism
4	Power Supply	● Universal AC 100 – 240 V ~ 50-60 Hz with PFC input ● Variance FAN speed control (Depends on temperature variant) ● 230W for OSRAM E20.8 Lamp @ normal operation (for P5271/P5271i) ● 280W for OSRAM Lamp driver @ normal operation (for P5290/P5390W)
5	Keystone correction	● +/ -40 degree
6	Cooling system	● Advanced Air Flow ● Two fans with system acoustic noise level ● Temperature control circuits with adaptive fan rotational speeds ● High altitude cooling mode ● Maximum touch temperature follow UL60950-1
7	Throw ratio	● 1.62 – 2.63:1 distance/width 61”@2m (for P5271i) ● 1.61 – 2.63:1 distance/width@60 (for P5290) ● 1.62 – 2.63:1 distance/width @60” (for P5271) ● 1.62 – 2.64:1 distance/width @60” P5390W)
8	Projection lens	● F# 2.41~ 3.2, f= 18.385~29.416 mm, 1.6X Mechanical Zoom Lens

No	Item	Description
9	Brightness	● Engineering spec: For P5271i/P5271: • 2790 ANSI Lumens (Typical, Full power mode) • 2500 ANSI Lumens (Minimum, Full power mode) For P5290/P5390W: • 3600 ANSI Lumens (Typical, Full power mode) • 3200 ANSI Lumens (Minimum, Full power mode) ● Marketing spec: • 3100 ANSI Lumens (for P5271/P5271i) • 4000 ANSI Lumens (for P5290/P5390W)
10	Contrast	● Engineering spec: • 2800 : 1 Full White with full power / full Black with eco power (Minimum; projection lens at tele mode) • 3200 : 1 Full White with full power / full Black with eco power (Typical; projection lens at tele mode) ● Marketing spec: • 3600: 1 Full White with full power / full Black with eco power
11	Uniformity	● Engineering spec: • 65% Japan (Minimum; Full power mode) • 80% Japan (Typical; Full power mode) ● Marketing spec: • 80% Japan (Full power mode)
12	Audio	● One 8-Ohm internal speaker ● Output Power: 2 Watts ● Input sensitivity 0.5Vrms
13	Lamp life	● 1500 hours min, 50% survival rate (Full power Mode) (For P5271/P5271i/P5390W) ● 2500 hours min, 50% survival rate (Eco power Mode) (For P5271/P5271i/P5390W) ● 2000 hours Typical@280W (Full power Mode) (For P5290) ● 3000 hours Typical@230W (Eco power Mode) (For P5290)
14	System controller	● TI DDP2431
15	Lamp housing	● Lamp Assembly could be changed by customer himself, but should read the user manual for instruction in advance ● Lamp Assembly should be provided by Coretronic and distributed through authorized agencies

No	Item	Description
16	TI DMD	● TI DMD 0.55” S450 2xLVDS XGA Digital Mirror Device (For P5271/P5290/P5271i) ● TI DMD 0.65” S450 2XLVDS WXGA Digital Mirror Device (For P5390W)
17	Number of active dots	● 1024 (H) x 768 (V) (For P5271/P5290/P5271i) ● 1280(H) x 800(V) (For P5390W)
19	Color wheel	● 6 segments ● 7200 rpm (2X) ● 9000 rpm@3X PAL 50Hz ● Segment Angle: R81Y41G84C31W52B71
20	Lamp	● 230-Watt OSRAM E20.8 Lamp (user replaceable) dimmable to 190W (for P5271/P5271i) ● 280-Watt OSRAM E20.9 Lamp (user replaceable) dimmable to 230W (for P5290/P5390W)
21	Video compatibility	● Standards : • NTSC (3.58/4.43) • PAL (B/D/G/H/I/M/N) • SECAM (B/D/G/K/K1/L)
22	Terminal	For MB: ● One 19-pin HDMI ● One DVI-D ● Two D-Sub 15-Pin Female Connector ● One D-Sub 15-Pin output ● One Mini DIN 4-Pin connector for S-Video ● One RCA Jack for Composite Video ● One Mini DIN 3-Pin Connector for RS232 ● Two phone jack for line audio input(one package/ two channel in) (for P5271i) ● Two phone jack for line audio input(same package/ two channel in) (for P5390W) ● One phone jack for audio output (for P5271i) ● One phone jack for audio output/One for RF remote (Same package) (for P5390W) ● One Type-B USB

1-2 Compatible Mode

Computer Compatibility

A. VGA Analog

Modes	Resolution	V.Frequency [Hz]	H.Frequency [KHz]	Clock [MHz]
(1) VGA Analog - PC Signal				
VGA	640x480	60	31.47	25.18
	640x480	72	37.86	31.50
	640x480	75	37.50	31.50
	640x480	85	43.27	36.00
	720x400	70	31.47	28.32
	720x400	85	37.93	35.50
SVGA	800x600	56	35.20	36.00
	800x600	60	37.88	40.00
	800x600	72	48.08	50.00
	800x600	75	46.88	49.50
	800x600	85	53.67	56.25
	832x624	75	49.72	57.28
XGA	1024x768	60	48.36	65.00
	1024x768	70	56.48	75.00
	1024x768	75	60.02	78.75
	1024x768	85	68.67	94.50
SXGA	1152x864	70	63.80	94.50
	1152x864	75	67.50	108.00
	1152x864	85	77.10	121.50
	1280x1024	60	63.98	108.00
	1280x1024	72	76.97	134.60
	1280x1024	75	79.98	135.00
	1280x1024	85	91.15	157.50
QuadVGA	1280x960	60	60.00	108.00
	1280x960	75	75.00	126.00
SXGA+	1400x1050	60	65.32	121.75
UXGA	1600x1200	60	75.00	162.00
PowerBook G4	640x480	60	31.47	25.17
PowerBook G4	640x480	66.6(67)	35.00	30.24
PowerBook G4	800x600	60	37.88	40.00
PowerBook G4	1024x768	60	48.36	65.00
PowerBook G4	1152x870	75	68.68	100.00
PowerBook G4	1280x960	75	75.00	126.00
i Mac DV(G3)	1024x768	75	60.24	80.00

Modes	Resolution	V.Frequency [Hz]	H.Frequency [KHz]	Clock [MHz]
(2) VGA Analog - Extended Wide timing				
WXGA	1280x768	60	47.78	79.50
	1280x768	75	60.29	102.25
	1280x768	85	68.63	117.50
	1280x720	60	45.00	74.25
	1280x800	60	49.70	83.50
	1440x900	60	55.94	106.50
	1680x1050	60	65.29	146.25
	1366x768	60	47.71	85.50
	1920x1080	60	67.50	148.50
	1024x600	60	37.50	50.40
(3) VGA Analog -Component Signal				
480i (NTSC)	720x480 (1440x480)	59.94 (29.97)	27.00	
480p (NTSC)	720x480	59.94	31.47	
576i (PAL)	720x576 (1440x576)	50 (25)	27.00	
576p (PAL)	720x576	50	31.25	
720p (NTSC)	1280x720	60	45.00	
720p (PAL)	1280x720	50	37.50	
1080i (NTSC)	1920x1080	60(30)	33.75	
1080i (PAL)	1920x1080	50	33.75	
1080p (NTSC)	1920x1080	60	67.50	
1080p (PAL)	1920x1080	50	56.26	

B. HDMI Digital

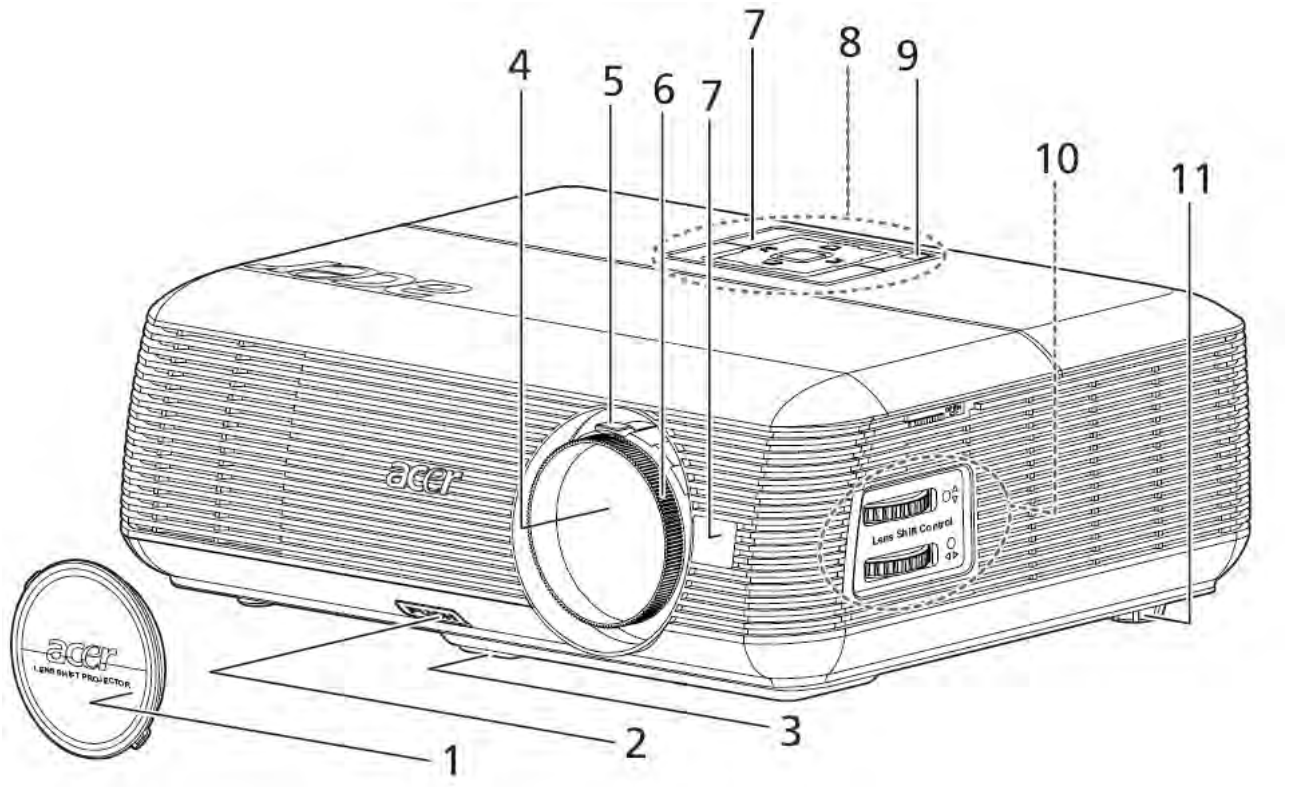
Modes	Resolution	V.Frequency [Hz]	H.Frequency [KHz]	Clock [MHz]
(1) HDMI - PC Signal (same as DVI)				
VGA	640x480	60	31.47	25.18
	640x480	72	37.86	31.50
	640x480	75	37.50	31.50
	640x480	85	43.27	36.00
	720x400	70	31.47	28.32
	720x400	85	37.93	35.50
SVGA	800x600	56	35.20	36.00
	800x600	60	37.88	40.00
	800x600	72	48.08	50.00
	800x600	75	46.88	49.50
	800x600	85	53.67	56.25
	832x624	75	49.72	57.28
XGA	1024x768	60	48.36	65.00
	1024x768	70	56.48	75.00
	1024x768	75	60.02	78.75
	1024x768	85	68.67	94.50
SXGA	1152x864	70	63.80	94.50
	1152x864	75	67.50	108.00
	1152x864	85	77.10	121.50
	1280x1024	60	63.98	108.00
	1280x1024	70	76.97	134.60
	1280x1024	75	79.98	135.00
	1280x1024	85	91.15	157.50
QuadVGA	1280x960	60	60.00	108.00
	1280x960	75	75.00	126.00
SXGA+	1400x1050	60	65.32	121.75
UXGA	1600x1200	60	75.00	162.00
PowerBook G4	640x480	60	31.47	25.17
PowerBook G4	640x480	66.6(67)	35.00	30.24
PowerBook G4	800x600	60	37.88	40.00
PowerBook G4	1024x768	60	48.36	65.00
PowerBook G4	1152x870	75	68.68	100.00
PowerBook G4	1280x960	75	75.00	126.00
i Mac DV(G3)	1024x768	75	60.24	80.00

Modes	Resolution	V.Frequency [Hz]	H.Frequency [KHz]	Clock [MHz]
(2) HDMI - Extended Wide timing (same as DVI)				
WXGA	1280x768	60	47.78	79.50
	1280x768	75	60.29	102.25
	1280x768	85	68.63	117.50
	1280x720	60	45.00	74.25
	1280x800	60	49.70	83.50
	1440x900	60	55.94	106.50
	1680x1050	60	65.29	146.25
	1366x768	60	47.71	85.50
	1920x1080	60	67.50	148.50
	1024x600	60	37.50	50.40
(3) HDMI - Video Signal				
480i (NTSC)	720x480 (1440x480)	59.94 (29.97)	27.00	
480p (NTSC)	720x480	59.94	31.47	
576i (PAL)	720x576 (1440x576)	50 (25)	27.00	
576p (PAL)	720x576	50	31.25	
720p (NTSC)	1280x720	60	45.00	
720p (PAL)	1280x720	50	37.50	
1080i (NTSC)	1920x1080	60(30)	33.75	
1080i (PAL)	1920x1080	50	33.75	
1080p (NTSC)	1920x1080	60	67.50	
1080p (PAL)	1920x1080	50	56.26	

1-3 Product Overview

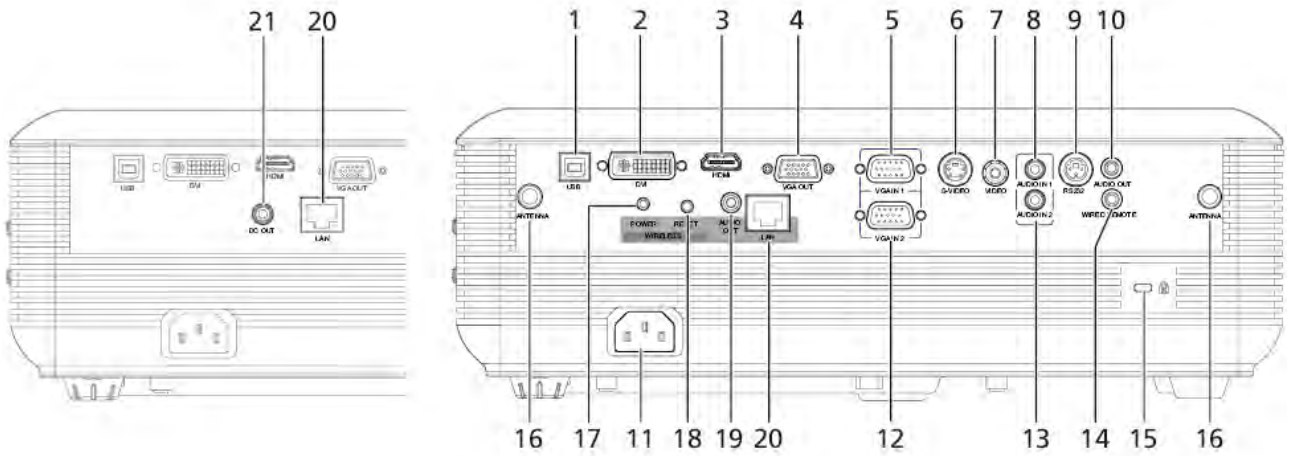
Projector Outlook

Front /Upper side



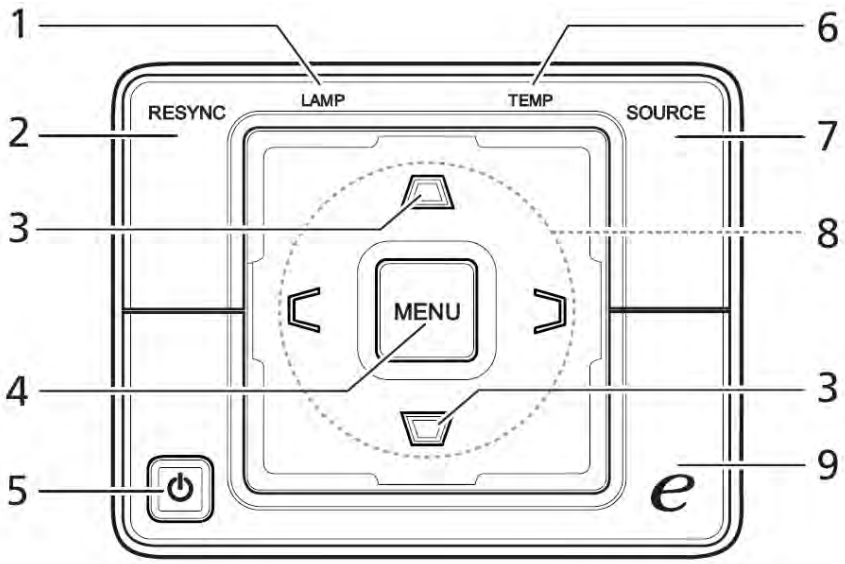
Item	Description	Item	Description
1	Lens cap	7	Remote control receivers
2	Elevator button	8	Control panel
3	Elevator foot	9	Power button
4	Zoom Lens	10	Lens shift control rings
5	Zoom ring	11	Tilt adjusting wheel
6	Focus ring		

Rear side



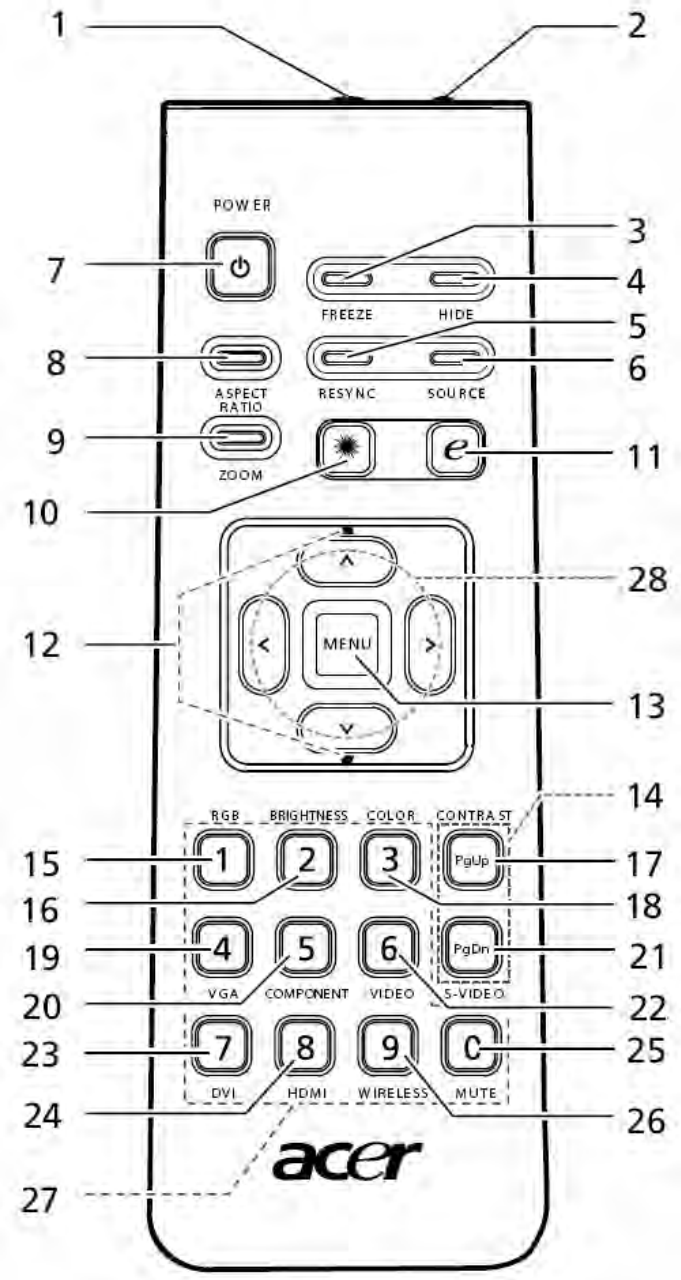
Item	Description	Item	Description
1	USB connector	13	Audio input connector (VGA IN 2/ DVI)
2	DVI input connector (for digital signal with HDCP function)	14	Wired IR remote input connector
3	HDMI connector	15	Kensington™ lock port
4	Monitor loop-through output connector (VGA-Out)	Below items are for P5271i only:	
5	PC analog signal/HDTV/SCART/ component video input connector (VGA IN 1)	16	Antenna
6	S-Video input connector	17	Power LED for wireless
7	Composite video input connector	18	Reset button
8	Audio input connector (VGA IN 1/ Component/Composite/S-Video/HDMI)	19	Audio output connector for wireless
9	RS232 connector	20	LAN (RJ45 Port for 10/100M Ethernet)
10	Audio output connector		
11	Power socket		
12	PC analog signal/HDTV/SCART/ component video input connector (VGA IN 2)		

Control Panel



Item	Function	Description
1	LAMP	Lamp Indicator LED
2	RESYNC	Automatically synchronizes the projector to the input source.
3	KEYSTONE	Adjusts the image to compensate for distortion caused by tilting the projector.
4	MENU	• Press “MENU” to launch the Onscreen display (OSD) menu, back to the previous step for the OSD menu operation or exit the OSD menu. • Confirm your selection of items.
5	POWER	See the contents in “Turning the Projector On/Off” section.
6	TEMP	Temp Indicator LED
7	SOURCE	Press “SOURCE” to choose RGB, Component, SVideo, Composite, SCART, HDTV and HDMI™ sources.
8	Four directional select keys	Use to ▲▼◀▶ select items or make adjustments to your selection.
9	Empowering key	Unique Acer functions: eOpening, eView, eTimer, ePower Management.

Remote Control Layout



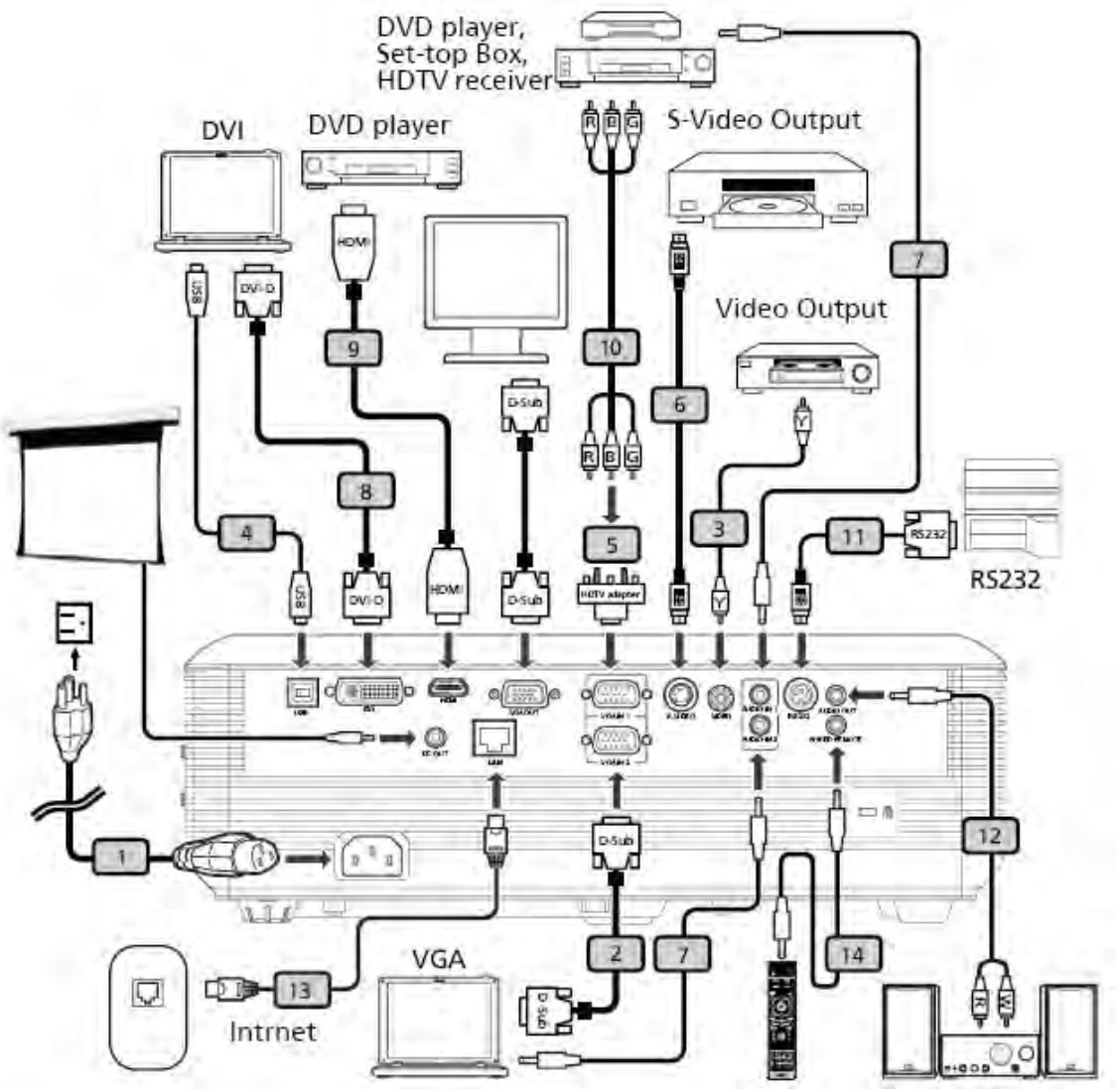
Item	Icon	Function	Description
1		Infrared transmitter	Sends signals to the projector.
2(#)		Laser pointer	Aim the remote at the viewing screen.
3		FREEZE	To pause the screen image.
4		HIDE	Momentarily turns off the video. Press “HIDE” to hide the image, press again to display the image.
5		RESYNC	Automatically synchronizes the projector to the input source.
6		SOURCE	Press “SOURCE” to choose from RGB, Component, S-Video, Composite, SCART, HDTV and HDMI™ sources.
7		POWER	Refer to the “Turning the Projector On/Off” section.
8		ASPECT RATIO	To choose the desired aspect ratio (Auto/4:3/16:9)
9		ZOOM	Zooms the projector display in or out.
10(#)		Laser button	Aim the remote at the viewing screen, press and hold this button to activate the laser pointer. This function is not supported in Japanese market.
11		Empowering key	Unique Acer functions: eOpening, eView, eTimer, ePower Management.
12		KEYSTONE	Adjusts the image to compensate for distortion caused by tilting the projector (± 40 degrees).
13		MENU	• Press “MENU” to launch the Onscreen display (OSD) menu, back to the previous step for the OSD menu operation or exit the OSD menu. • Confirm your selection of items.
14		PAGE	For computer mode only. Use this button to select the next or previous page. This function is only available when connected to a computer via a USB cable.
15		RGB	Press “RGB” for true-color optimization.
16		BRIGHTNESS	Press “BRIGHTNESS” to adjust the brightness of the image.
17		CONTRAST	Use the “CONTRAST” option to control the difference between the lightest and darkest parts of the picture.
18		COLOR	Press “COLOR” to adjust the color temperature of image.
19		VGA	Press “VGA” to change source to the VGA connector. This connector supports analog RGB, YPbPr (480p/576p/720p/1080i), YCbCr (480i/576i) and RGBsync.
20		COMPONENT	Press “COMPONENT” to change source to Component video. This connection supports YPbPr (480p/576p/720p/1080i) and YCbCr (480i/576i).

Item	Icon	Function	Description
21		S-VIDEO	To change source to S-Video.
22		VIDEO	To change source to COMPOSITE VIDEO.
23		DVI	To change source to DVI-D.
24		HDMI™	To change source to HDMI™. (for the model if with HDMI™ connector)
25		MUTE	To turn on/off the volume.
26		WIRELESS	Press “WIRELESS” to display the image which is wirelessly transmitted from the PC to the projector via the “Acer eProjection Management” utility. (for wireless model)
27		KeyPad 0~9	Press “0~9” to input a password in the “Security”.
28		Four directional select keys	Use up, down, left, right buttons to select items or make adjustments to your selection.

Note: “#” Japan area is not supported.

Getting Started

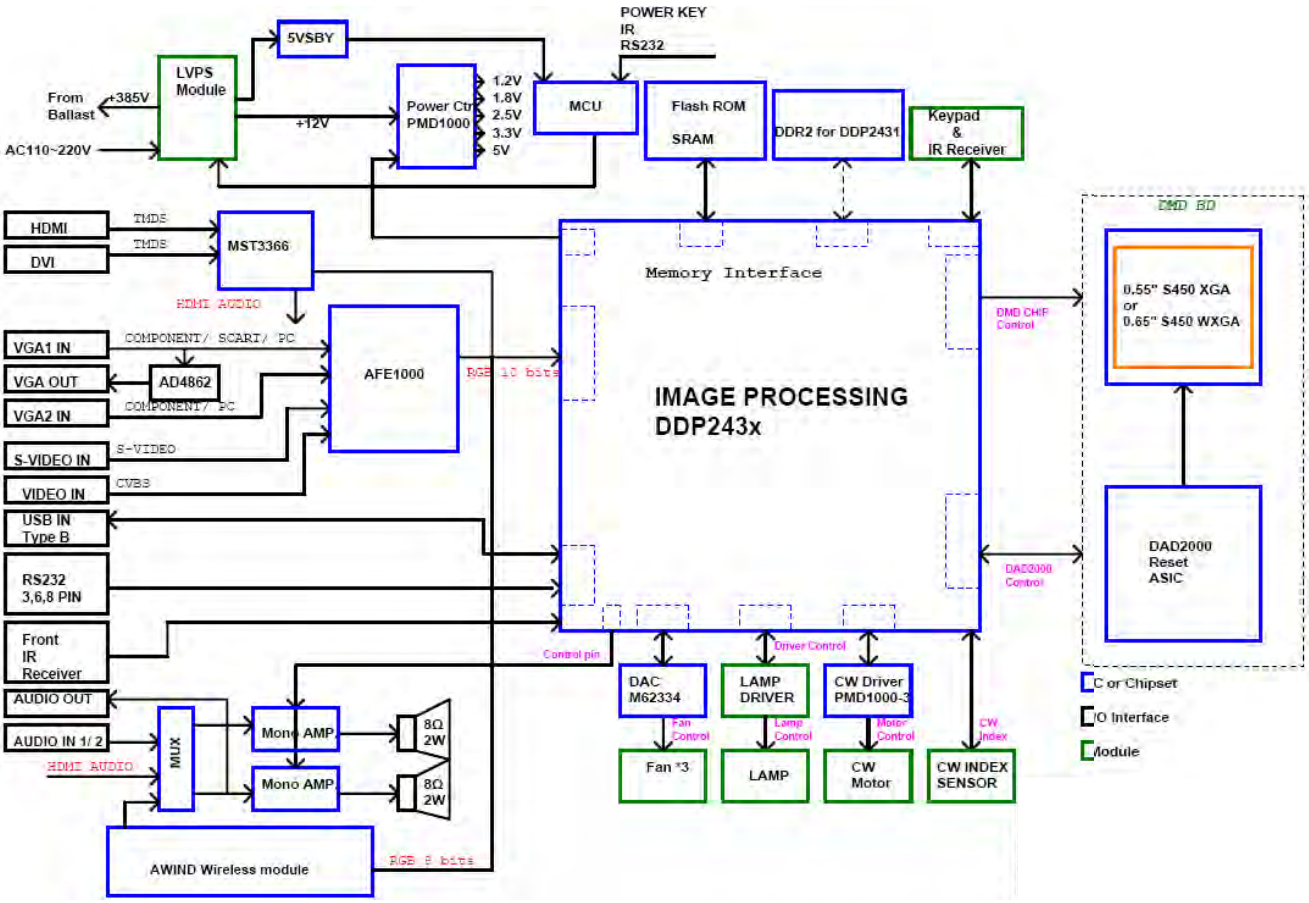
Connecting the Projector



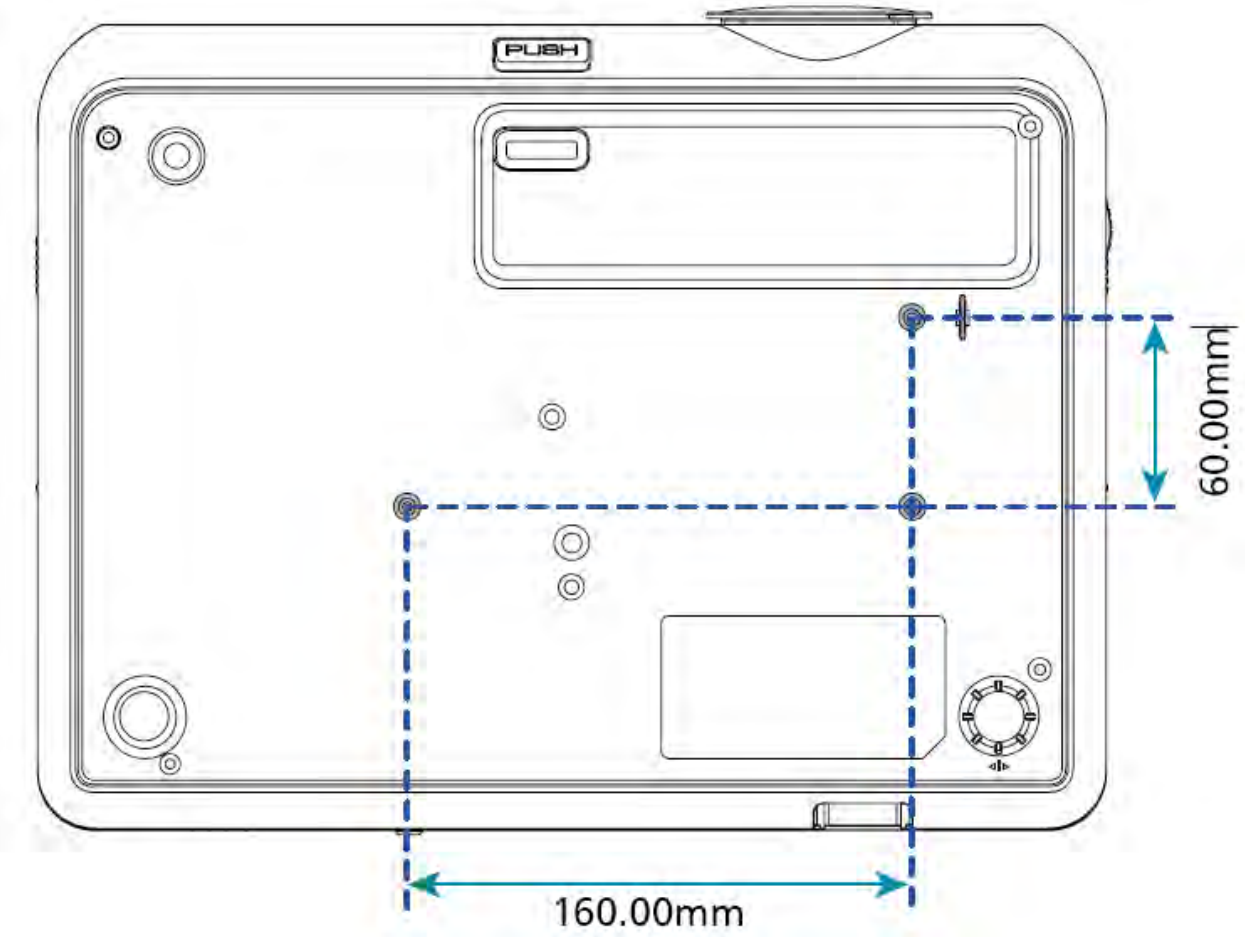
Item	Description	Item	Description
1	Power cord	8	DVI cable
2	VGA cable	9	HDMI cable
3	Composite video cable	10	3 RCA component cable
4	USB cable	11	RS232 cable
5	VGA to component/HDTV adapter	12	Audio cable Jack/RCA
6	S-Video cable	13	LAN Cable
7	Audio cable jack/jack	14	Audio cable jack for wired remote

Note: To ensure the projector works well with your computer, please make sure the timing of the display mode is compatible with the projector.

System Block Diagram (P5271)



Bottom Cover Dimension



Chapter 2

Disassembly & Assembly Process

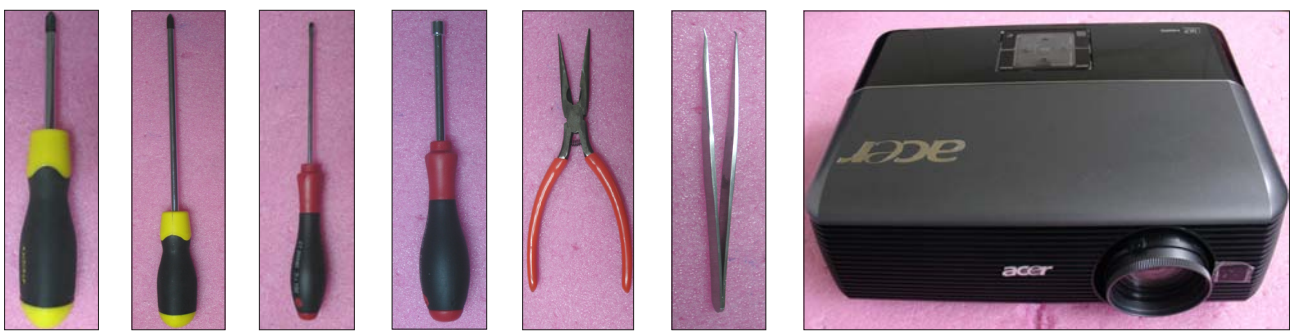
2-1 Equipment Needed & Product Overview

1. Screw Bit (+): 105
2. Screw Bit (+): 107
3. Screw Bit (-): 107
4. Hex Sleeves 5mm
5. Long Nose Nipper
6. Tweezers
7. Projector

** Before you start: This process is protective level II. Operators should wear electrostatic chains.*

** Note: - If you need to replace the Main Board, you have to get into Service Mode and record the lamp usage hour, please refer to section 2-19.*

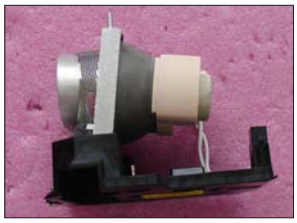
- As the process of P5290/P5390W/P5271i disassembling is the same as P5271, we take P5271 for example here.



2-2 Disassemble Lamp Module

1. Push the two clips (as red square) as yellow arrows point on the left/right side of the projector.

2. Pull upword the Lamp Cover Module slightly (as blue arrows point).
3. Loosen 3 screws (as red circle) on the Lamp Module.
4. Take off the Lamp Module.

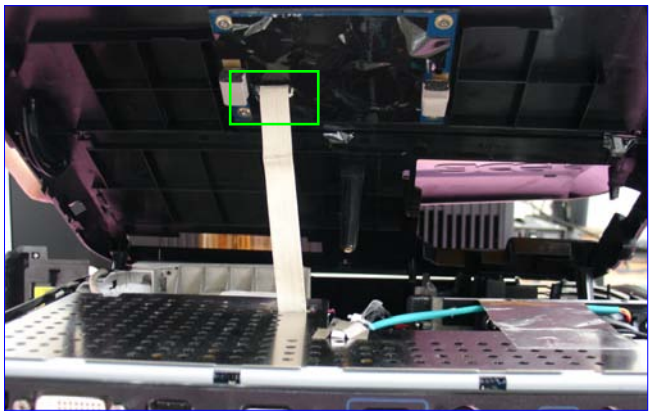


2-3 Disassemble Top/Lamp Cover Module

1. Unscrew 5 screws (as red circle) from the Bottom Cover.
2. Unscrew 1 screw (as yellow circle)

Note: - When you disassemble the Top/Lamp Cover, take care the FPC cable which connect Main Board and Keypad Board Module, please unplug the connector (as green square) from Keypad Board Module.

3. Disassemble the Top/Lamp Cover Module.



2-4 Disassemble Keypad Board Module

1. Unscrew 4 screws (as red circle) to disassemble the Keypad Board Module.

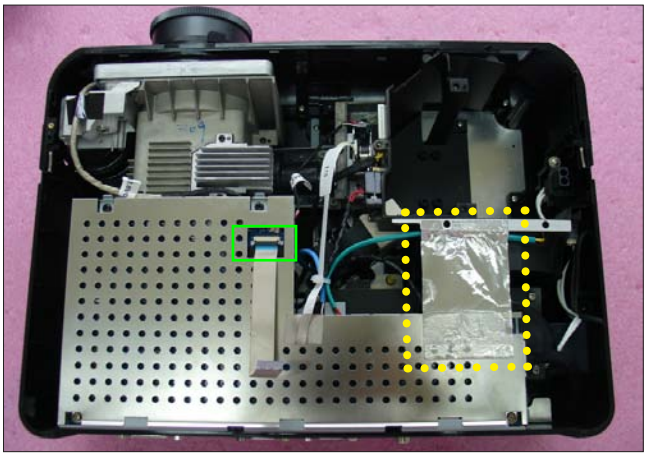
Keypad Board

Keypad

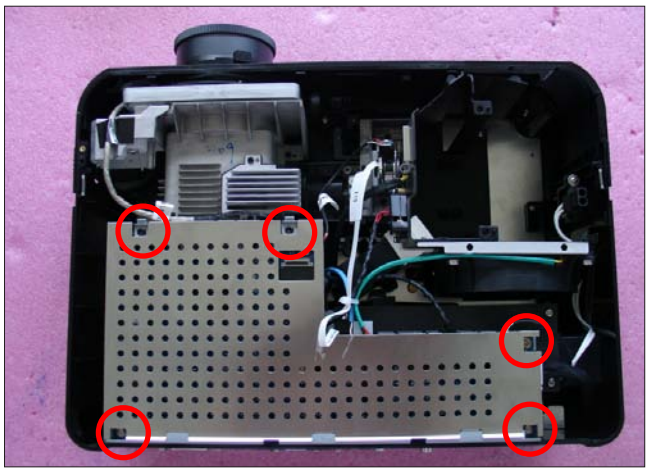
NOTE: Circuit boards > 10 cm² has been highlighted with the yellow rectangle as above image shows. Please detach the Circuit boards and follow local regulations for disposal.

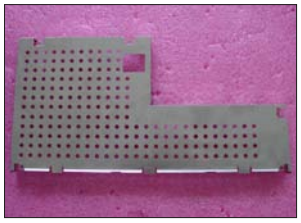
2-5 Disassemble Main Board Top Shielding

1. Unplug 1 connector (as green square) to remove the FPC cable.
2. Tear off the Heatsink Aluminum (as yellow dot square).



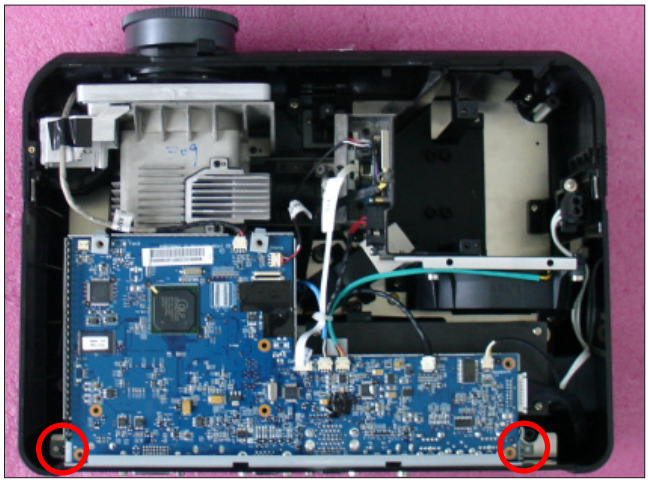
3. Unscrew 5 screws (as red circle) to disassemble the Main Board Top Shielding.



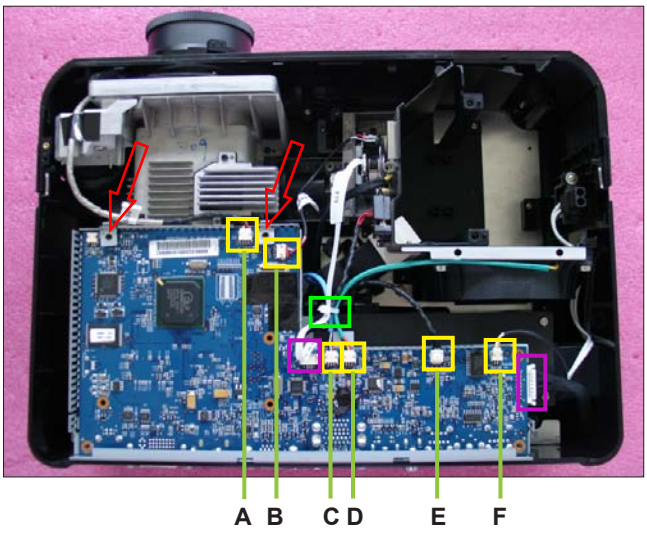


2-6 Disassemble Main Board Module

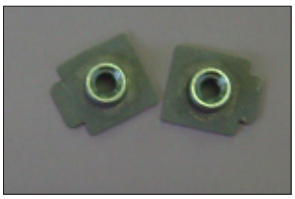
1. Unscrew 8 hex screws (as green circle).
2. Unscrew 2 screws (as red circle).



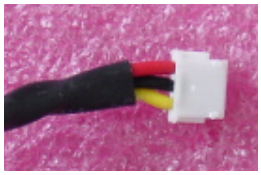
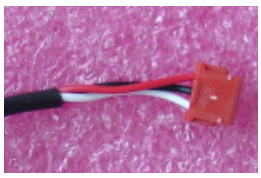
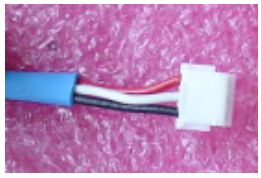
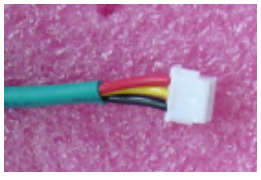
3. Remove 2 Main Board Shielding Bottom Bracket (as red arrows point).
4. Cut off the cable tie (as green square).
5. Unplug 2 connectors (as purple square) to disassemble the Color Wheel cable and Lamp Driver to Main Board cable.
6. Unplug 6 connectors (as yellow square).

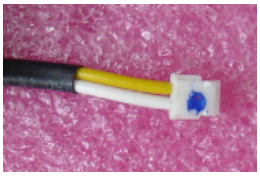


Please refer to the table as below for details of each connector

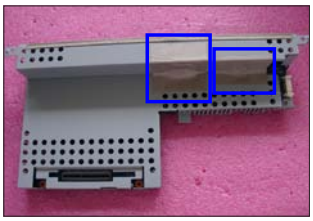
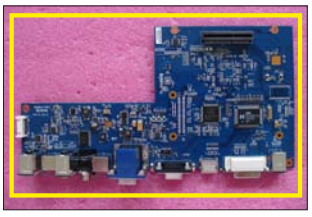
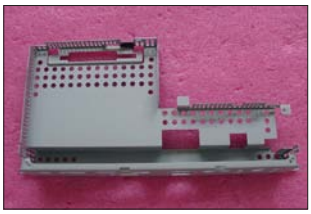


Bracket

Item	Male Connector on Main Board	The key feature	Figure
A	IR	Compose of Red/Black/Yellow Wire and Black wire tube (3 pin)	
B	Photo Sensor	Compose of Red/White/Black Wire , Red Connector and Black wire tube (3 pin)	
C	Blower	Compose of Red/Black/White Wire and Blue wire tube (3 pin)	
D	System Fan	Compose of Red/Yellow/Black Wire and Green wire tube (3 pin)	

Item	Male Connector on Main Board	The key feature	Figure
E	Lamp Driver	Black wire tube (5 pin)	
F	Speaker	Compose of Yellow/White Wire and Black wire tube (2 pin)	

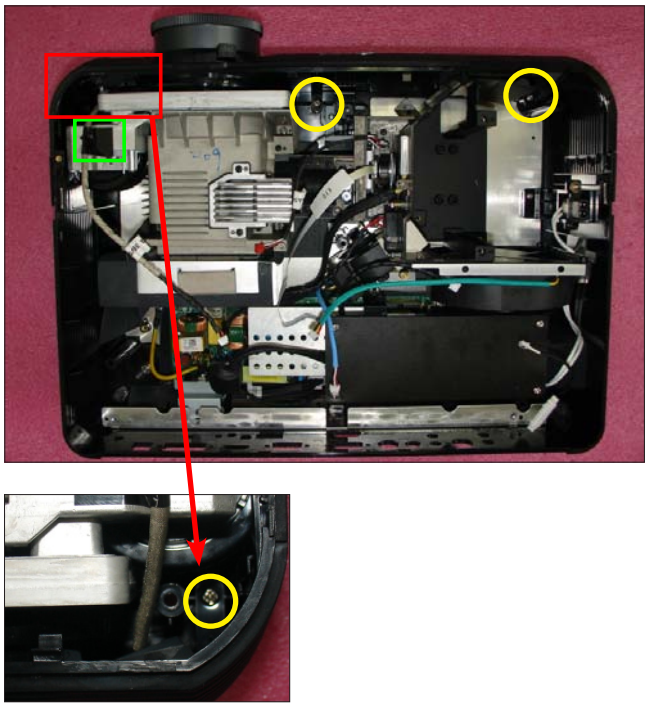
7. Disassemble the Main Board Module.
8. Tear off 2 EMI tapes (as blue square) to separate Main Board Module and Main Board Bottom Shielding.

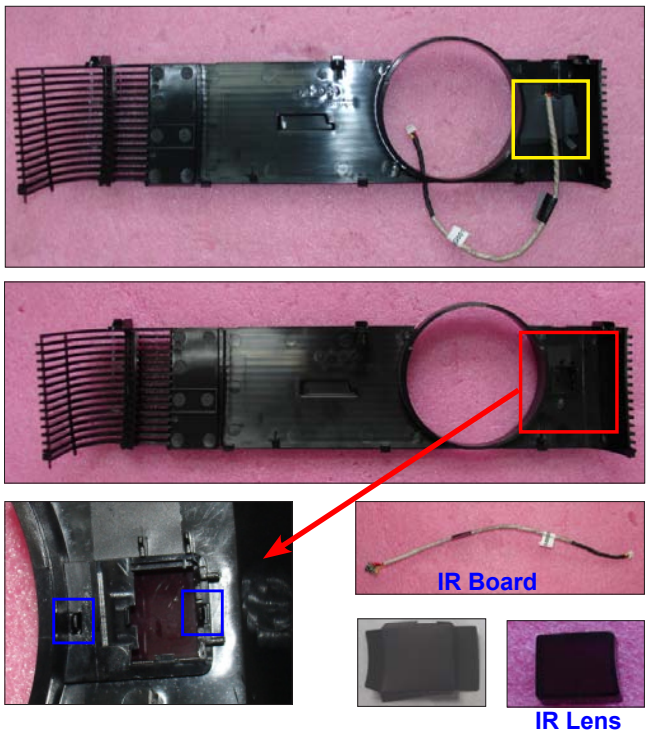
NOTE: Circuit boards > 10 cm² has been highlighted with the yellow rectangle as above image shows. Please detach the Circuit boards and follow local regulations for disposal.

2-7 Disassemble Front Cover Module

1. Tear off 3M tape (as green square).
2. Unscrew 3 screws (as yellow circle).
3. Disassemble the Front Cover Module.

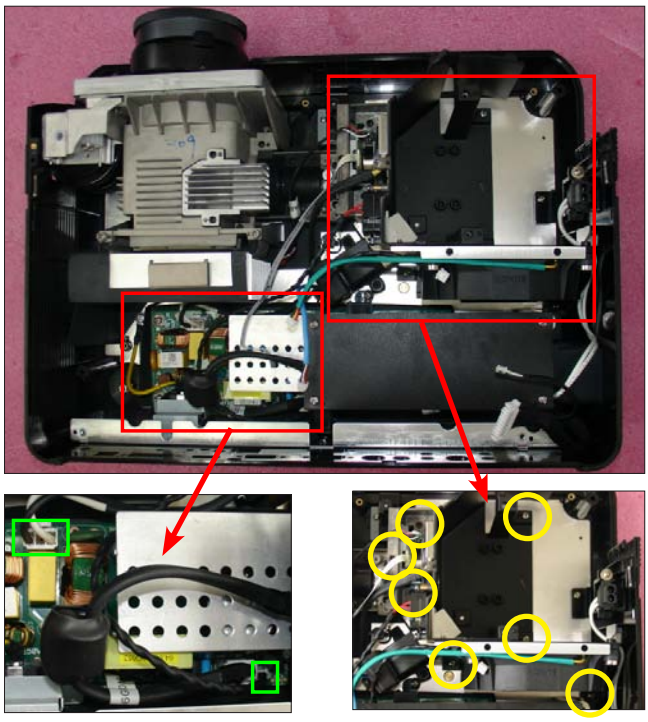


4. Tear off black mylar (as yellow square) to disassemble IR Board.
5. Unfasten 2 tenons (as blue square) to disassemble IR Lens.

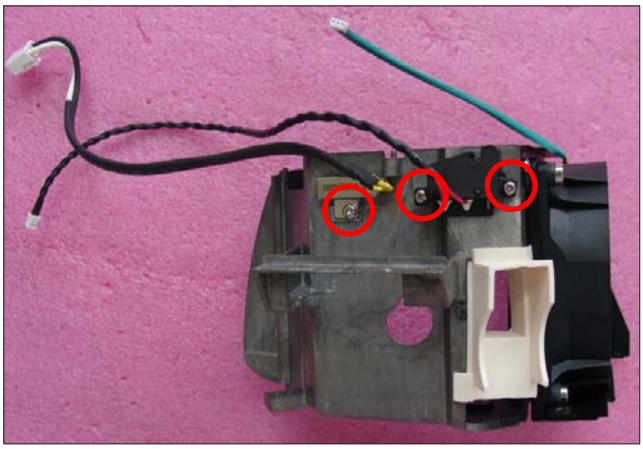


2-8 Disassemble System Fan Module and Color Wheel Module

1. Unplug 2 connectors (as green square).
2. Unscrew 7 screws (as yellow circle).
3. Disassemble the System Fan Module.



4. Unscrew 3 screws (as red circle) to disassemble the Interrupt Switch and Thermal Switch.

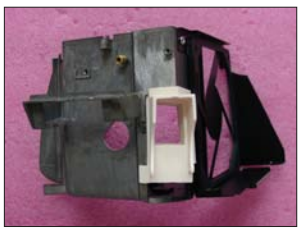


Interrupt Switch

Thermal Switch

5. Unscrew 4 screws (as blue circle) to separate System Fan and Fan Shielding.

System Fan



Fan Shielding

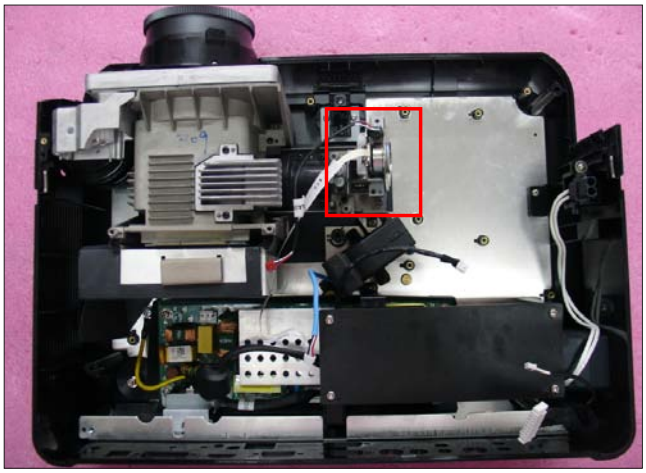
Note: - Take the Fan Module as the right gesture.

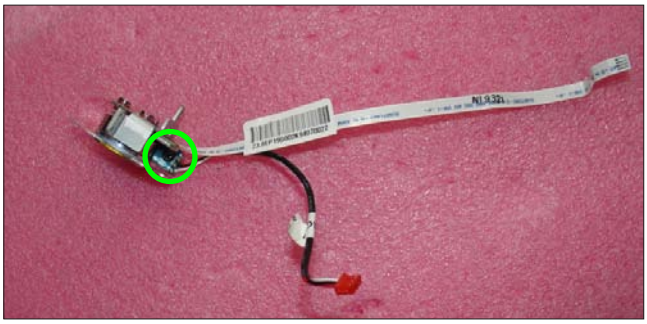
the right gesture

the wrong gesture

6. Remove the Color Wheel Module.

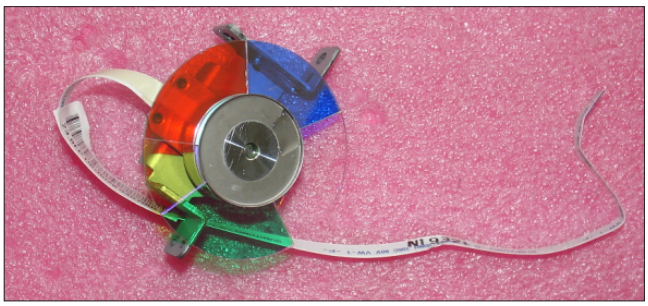
7. Unscrew 1 screw (as green circle).





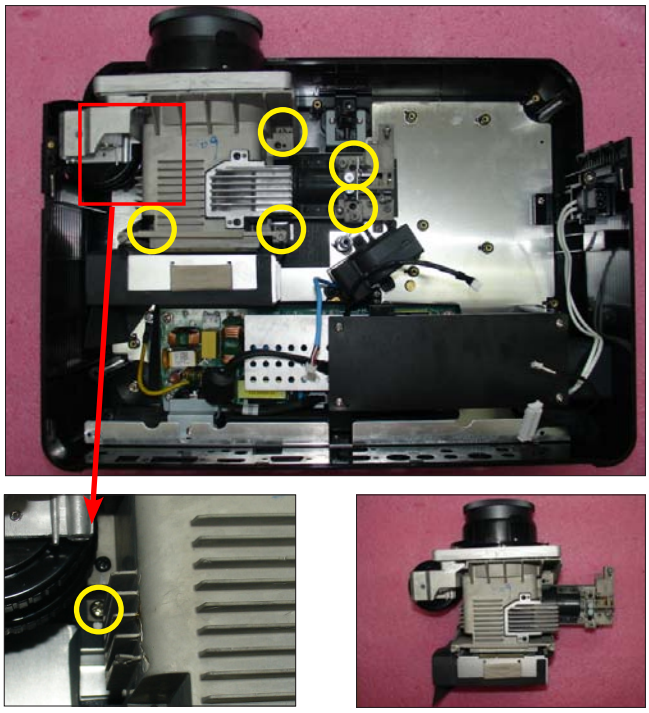
8. Separate the Photo Sensor Board and Color Wheel.

Note: - Avoid touching the glass parts of Color Wheel.



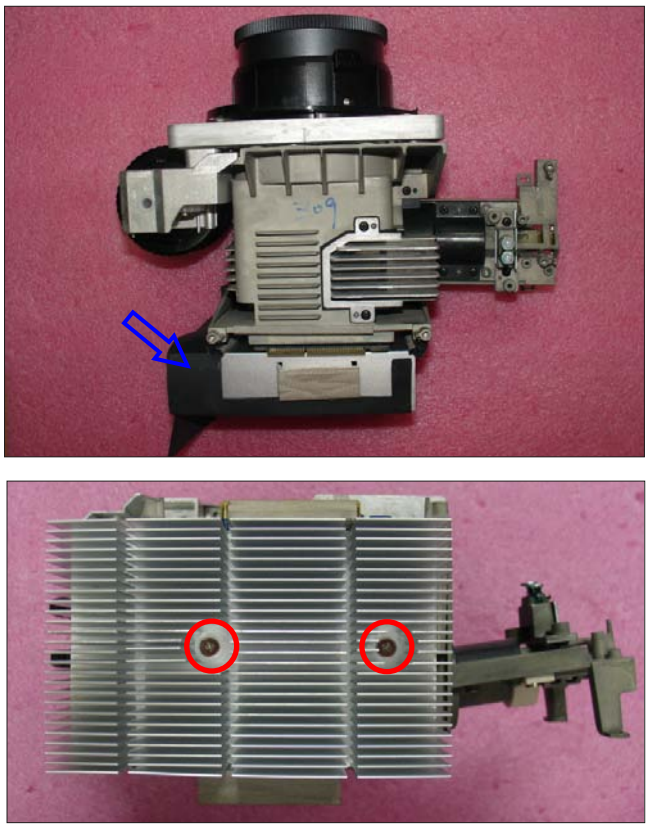
2-9 Disassemble Engine Module

1. Unscrew 6 screws (as yellow circle) to disassemble the Engine Module.



2-10 Disassemble DMD Chip and DMD Board

1. Tear off the black mylar (as blue arrow point).
2. Unscrew 2 screws (as red circle).

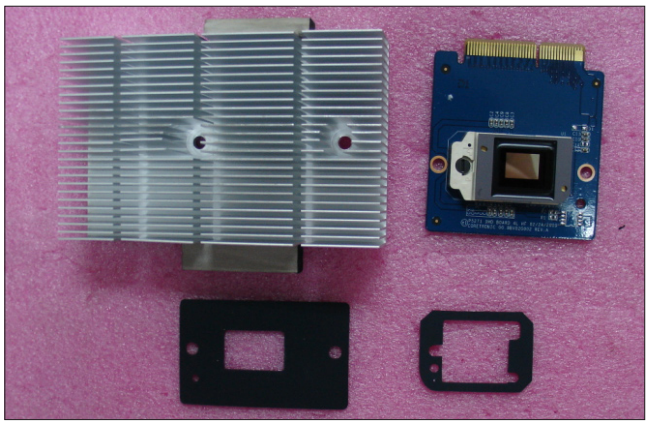


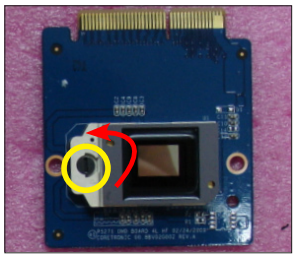
3. Disassemble the Heat Sink and DMD Module.

4. Rotate the screw (as yellow circle) 180° counterclockwise to disassemble the DMD Board and DMD Chip.

Note: - Avoid touching the DMD Chip when you disassemble it.

- Pay attention to the fixed position when assembling the DMD Chip.

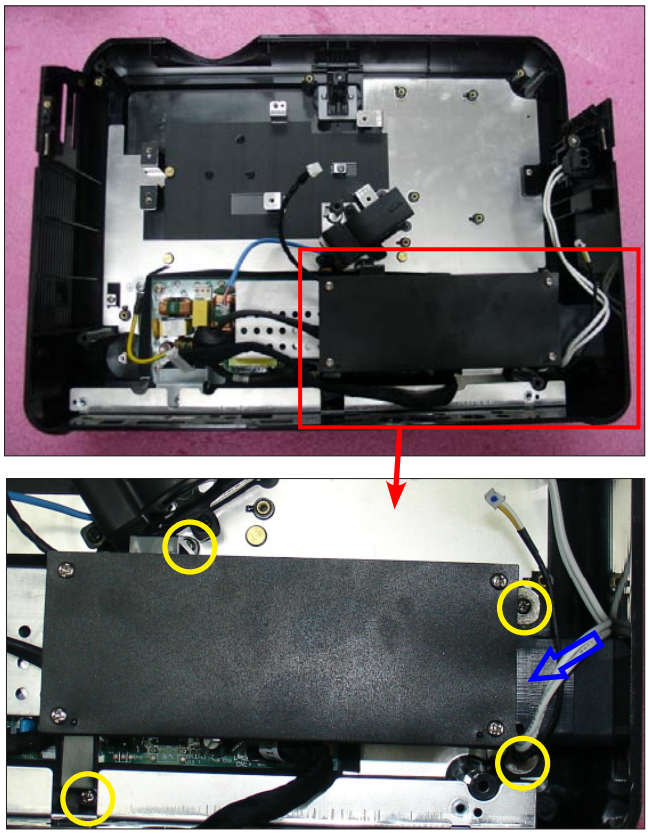




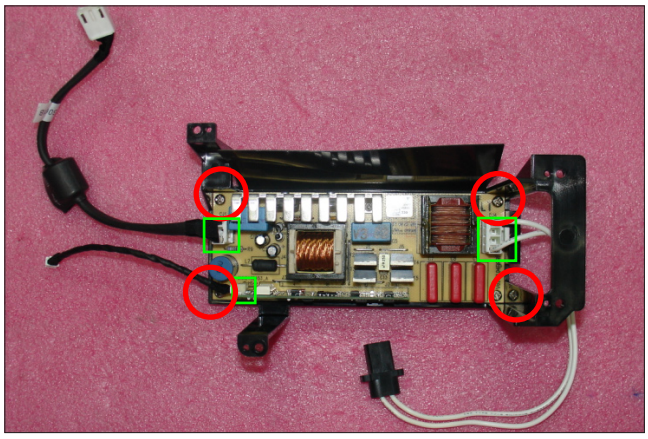
NOTE: Circuit boards > 10 cm² has been highlighted with the yellow rectangle as above image shows. Please detach the Circuit boards and follow local regulations for disposal.

2-11 Disassemble Lamp Driver Module and Speaker

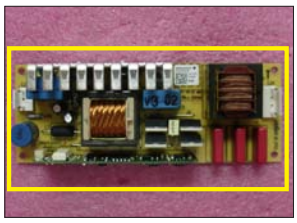
1. Unscrew 4 screws (as yellow circle) to disassemble the Lamp Driver Module and the Speaker (as blue arrow point).



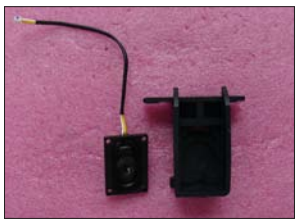
2. Unplug 3 connectors (as green square) to disassemble the cables.
3. Unscrew 4 screws (as red circle).



4. Separate Lamp Driver Module and Lamp Driver Holder.
5. Separate Speaker and Speaker Rubber.



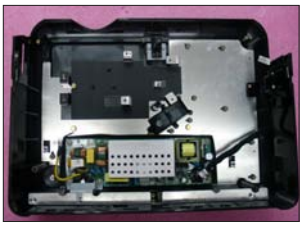
Lamp Driver Holder



NOTE: Circuit boards > 10 cm² has been highlighted with the yellow rectangle as above image shows. Please detach the Circuit boards and follow local regulations for disposal.

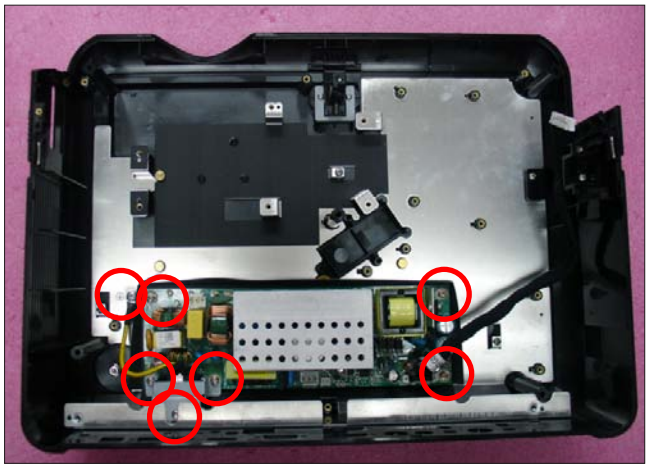
2-12 Disassemble Blower

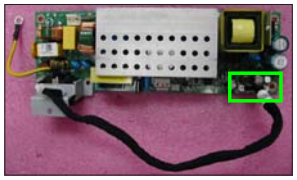
1. Unscrew 3 screws (as green circle) to disassemble the Blower Module.

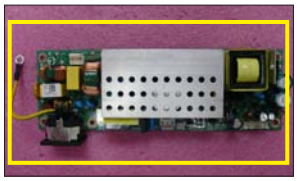


2-13 Disassemble LVPS Module

1. Unscrew 7 screws (as red circle) to disassemble the LVPS Module.
2. Unplug 1 connector (as green square).
3. Remove the cable and the AC Inlet Bracket from LVPS Module.





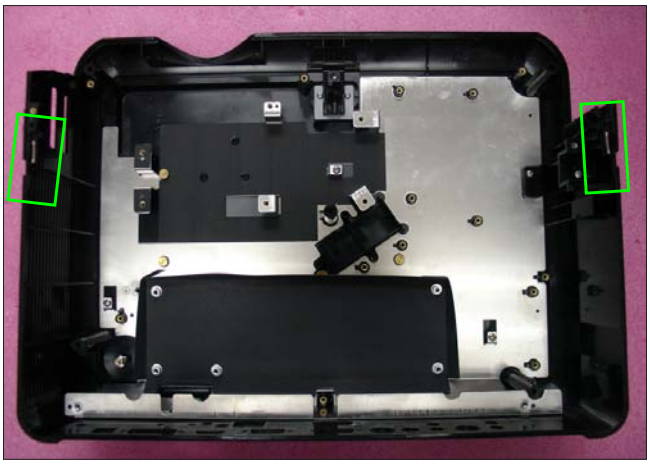


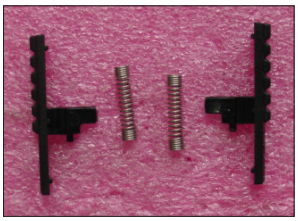
AC Inlet Bracket

NOTE: Circuit boards > 10 cm² has been highlighted with the yellow rectangle as above image shows. Please detach the Circuit boards and follow local regulations for disposal.

2-14 Disassemble Latch and Spring

1. Take out 2 springs on each side to disassemble 2 latches (as green square).

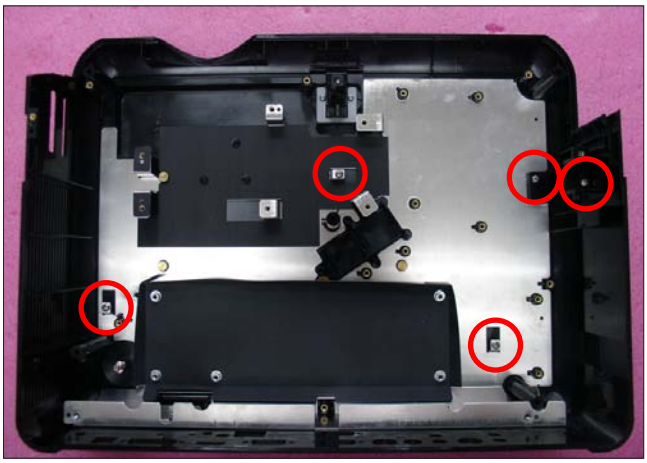




Latches and Springs

2-15 Disassemble Bottom Shielding

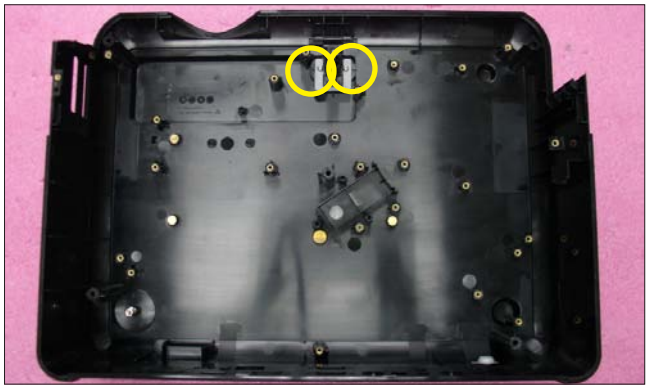
1. Unscrew 5 screws (as red cricle) to disassemble Bottom Shielding and Lamp Connector Holder.



Lamp Connector Holder

2-16 Disassemble Elevator

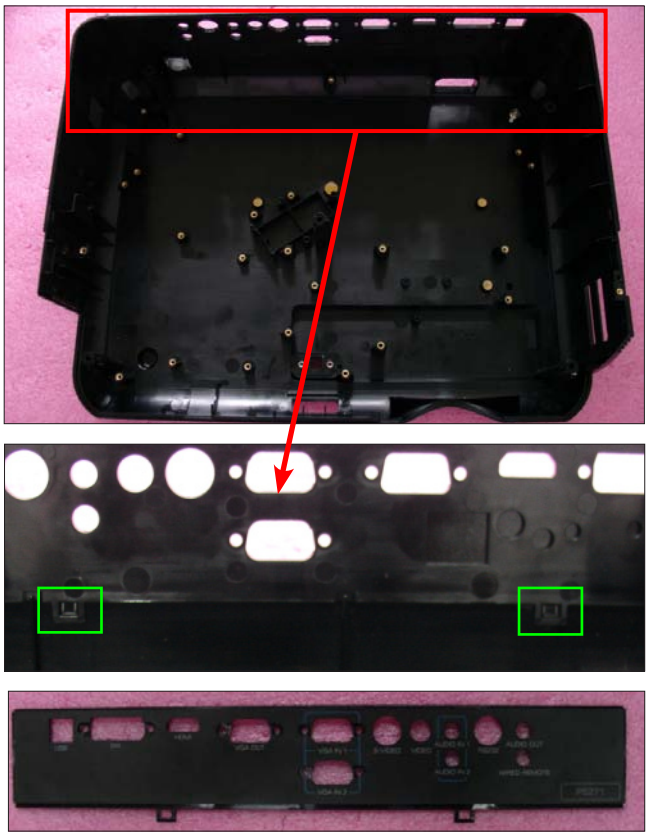
1. Unscrew 1 screw (as red cricle) on the backside of Bottom Cover.
2. Unscrew 2 screws (as yellow cricle) on the inside of Bottom Cover.



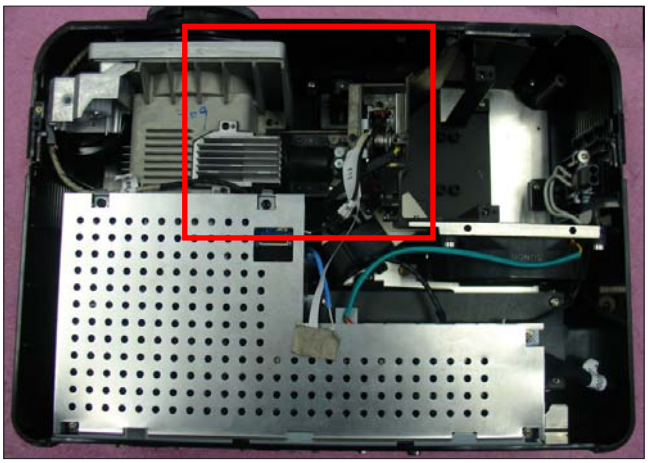
3. Disassemble the Elevator Foot, Elevator Bracket and Elevator Push Button.

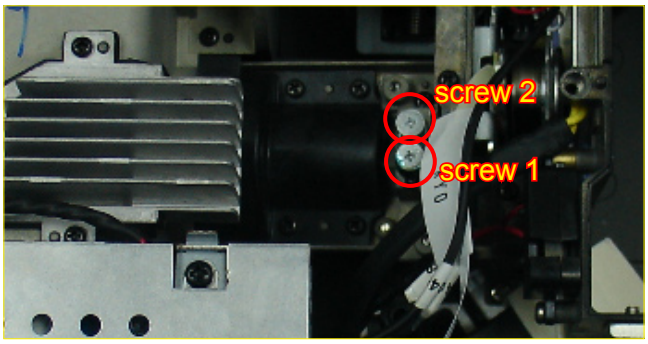
2-17 Disassemble IO Cover

1. Unfasten 2 tenons (as green square) to disassemble IO Cover.



2-18 Rod Adjustment





1. Environment Adjustment

   - The distance between the engine and the screen is 2M.

   - This process should be done at a dark environment (under 2 Lux).

2. Procedure Adjustment

   - Change the screen to "white screen".

   - Adjust the screws by using the rod on the engine module to readjust the image.

     ("Screw 1" should be adjusted first, and then "screw 2". Adjust until the yellowish or bluish parts disappeared.)

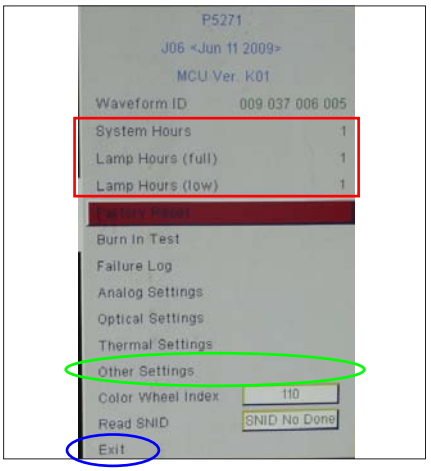
3. Abnormal image inspection

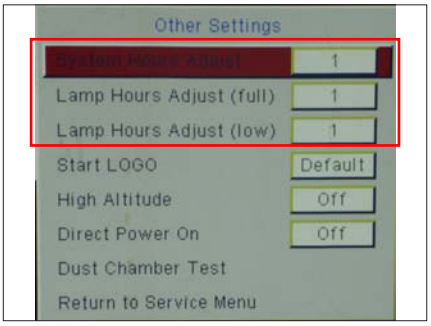
   - It should not have any abnormal color at the frame of the image by estimating through the eyes.

Note: - To avoid over adjusting the rod.

- After the opreation, please use the glue to fix the screws.

2-19 Re-write System and Lamp Usage Hour





1. Get into Service Mode

   - Press "Power", "Left", "Left" and "Menu" buttons sequentially to get into Service Mode.

2. Get into Other Settings Mode

   - Use "Up" or "Down" buttons to select "Other Settings", then press "Menu" button.

3. Re-write System Hours

   - Select "System Hours Adjust" and use "Left" or "Right" buttons to re-write the "System Hours".

4. Re-write Lamp Hours (full/low)

   - Select "Lamp Hours Adjust (full)"/"Lamp Hours Adjust (low)" and use "Left" or "Right" buttons to re-write the "Lamp Hours (full)"/"Lamp Hours (low)".

5. Exit Service Mode

   - Use "Up" or "Down" buttons to select "Exit", press "Menu" button to exit the Service Mode.

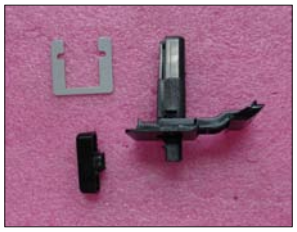
Note: left key = decrease System/Lamp hour
right key =increase System/Lamp hour

2-20 Assemble IO Cover

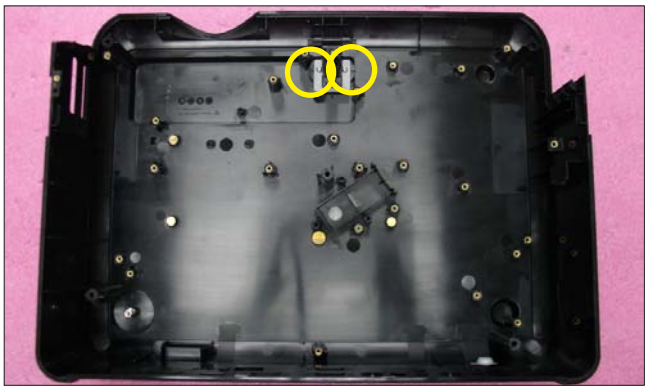
1. Fasten 2 tenons (as green square) to assemble the IO Cover.

2-21 Assemble Elevator

1. Assemble the Elevator Foot, Elevator Bracket and Elevator Push Button.

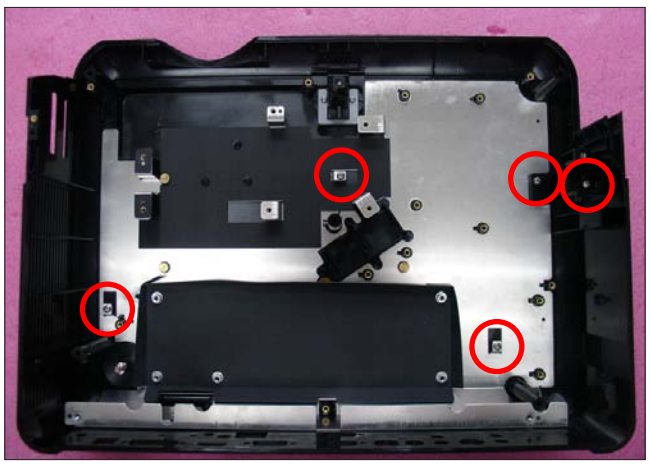


2. Screw 2 screws (as yellow circle) on the inside of Bottom Cover.
3. Screw 1 screw (as red cricle) on the backside of Bottom Cover.



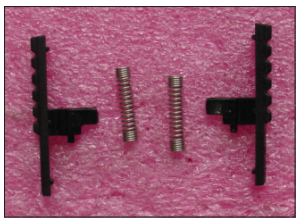
2-22 Assemble Bottom Shielding

1. Screw 5 screws (as red cricle) to assemble Bottom Shielding and Lamp Connector Holder.



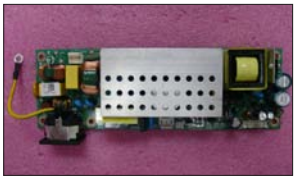
2-23 Assemble Latch and Spring

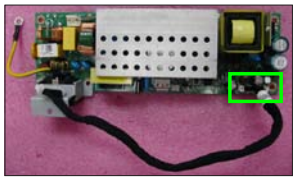
1. Fix 2 springs on each side to assemble 2 latches (as green square).

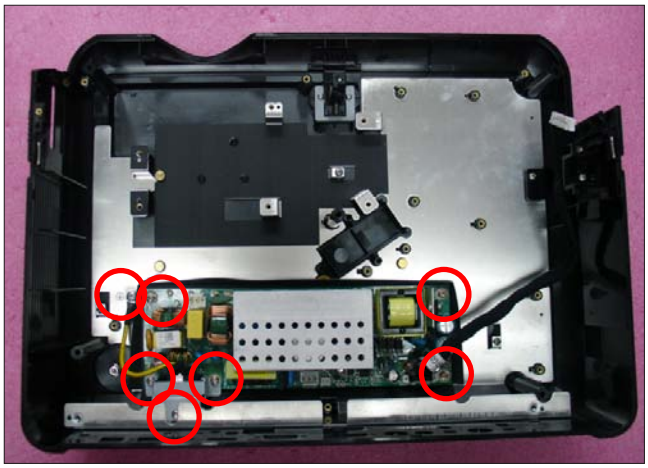


2-24 Assemble LVPS Module

1. Assemble the cable and the AC Inlet Bracket.
2. Plug 1 connector (as green square).
3. Screw 7 screws (as red circle) to assemble the LVPS Module.





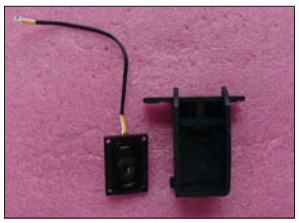


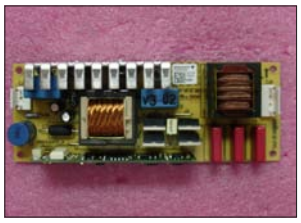
2-25 Assemble Blower

1. Screw 3 screws (as green circle) to assemble the Blower Module.

2-26 Assemble Speaker and Lamp Driver Module

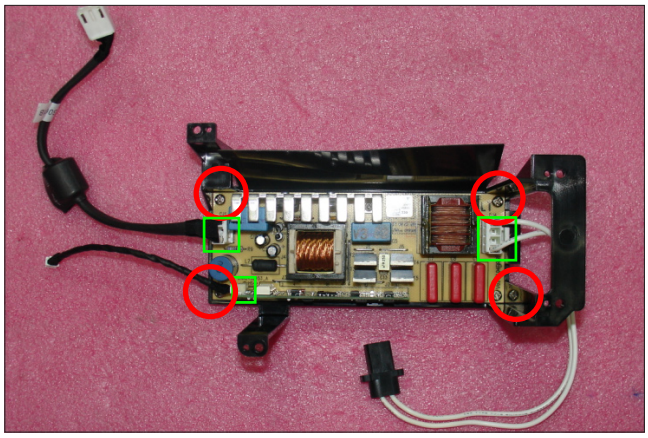
1. Assemble Speaker and Speaker Rubber.
2. Assemble Lamp Driver Module and Lamp Driver Holder.



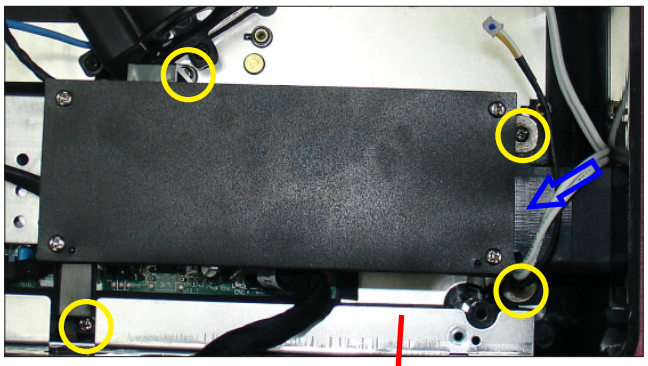


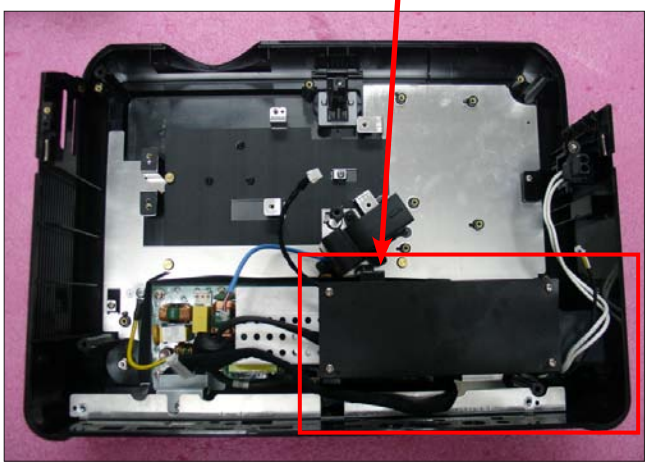
3. Screw 4 screws (as red circle).

4. Plug 3 connectors (as green square) to assemble the cables.



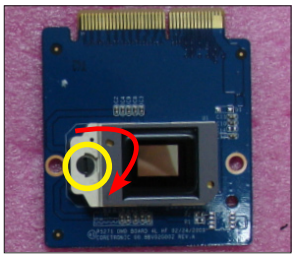
5. Screw 4 screws (as yellow circle) to assemble the Lamp Driver Module and the Speaker (as blue arrow point).



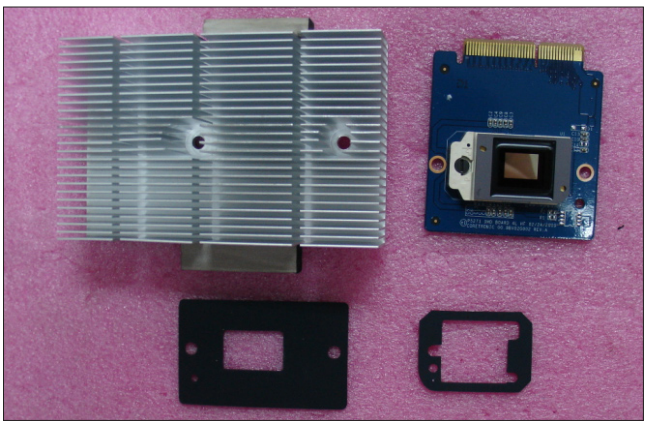


2-27 Assemble DMD Chip and DMD Board

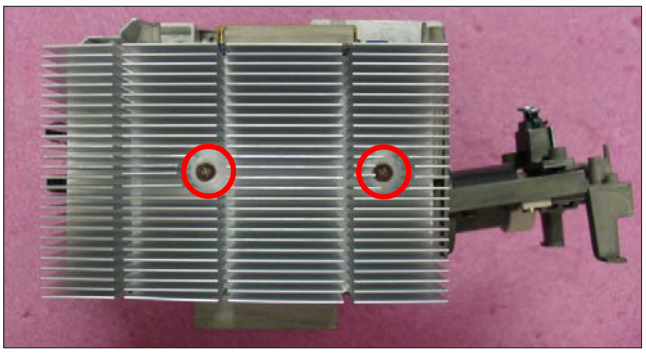
1. Rotate the screw (as yellow circle) 180° clockwise to assemble the DMD Board and DMD Chip.

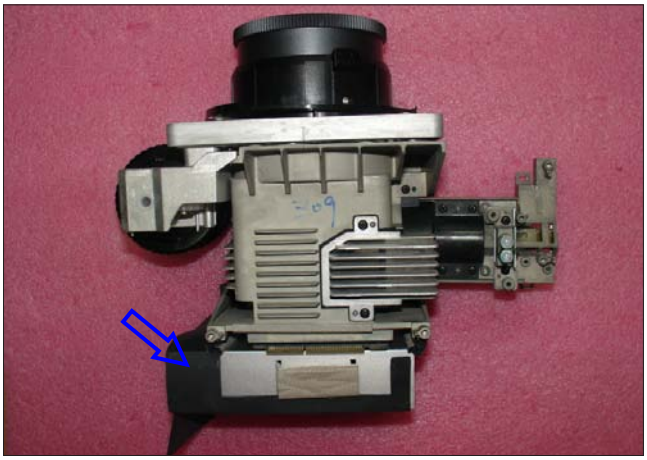


2. Assemble the Heat Sink and DMD Module.



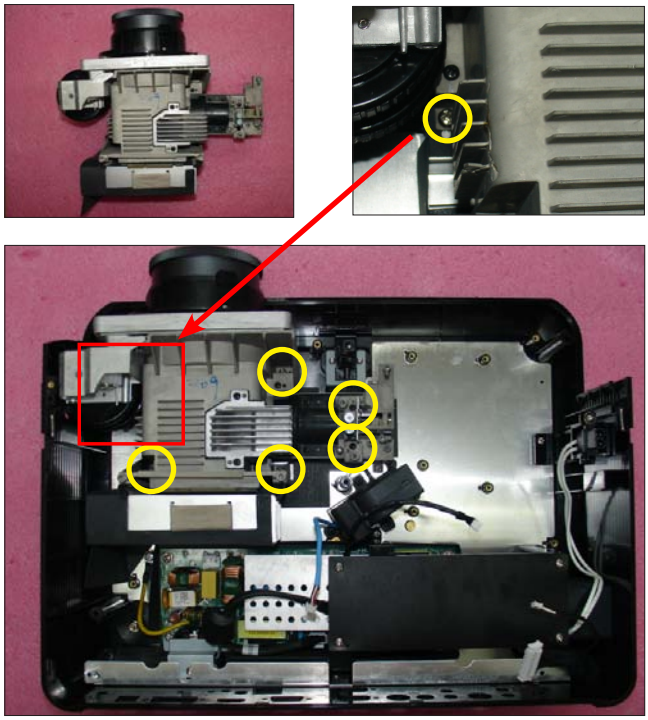
3. Screw 2 screws (as red circle).
4. Stick black mylar (as blue arrow point).





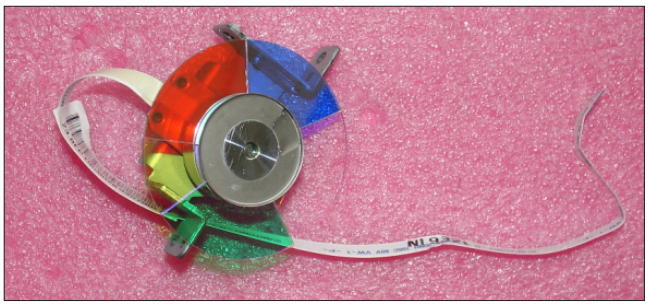
2-28 Assemble Engine Module

1. Screw 6 screws (as yellow circle) to assemble the Engine Module.



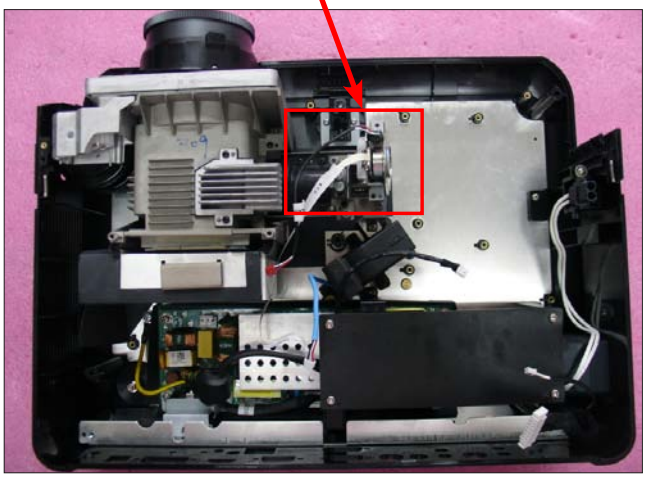
2-29 Assemble Color Wheel Module and System Fan Module

1. Assemble the Photo Sensor Board and Color Wheel.



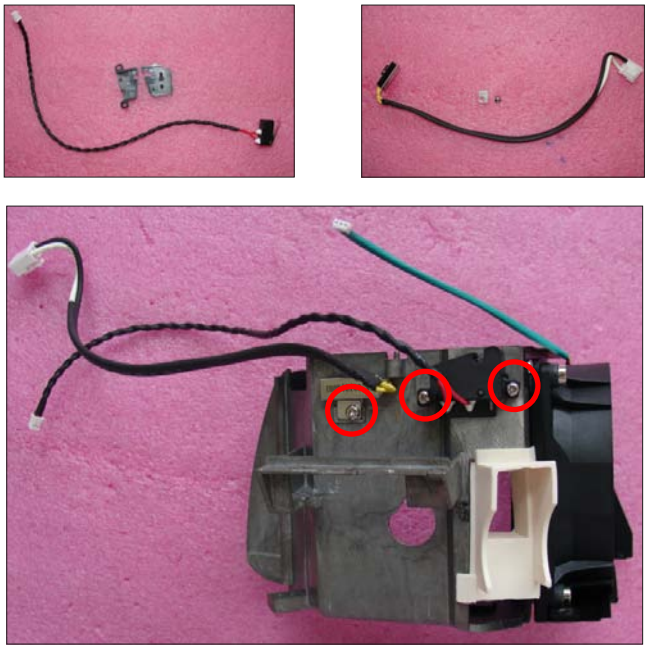
2. Screw 1 screw (as green circle).

3. Assemble the Color Wheel Module.

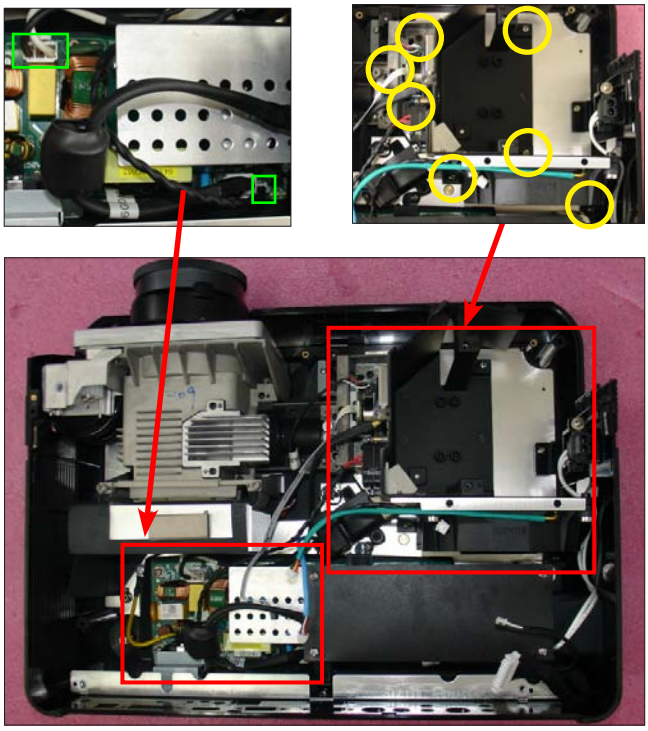


4. Screw 4 screws (as blue circle) to assemble System Fan and Fan Shielding

5. Screw 3 screws (as red circle) to assemble the Interrupt Switch and Thermal Switch.

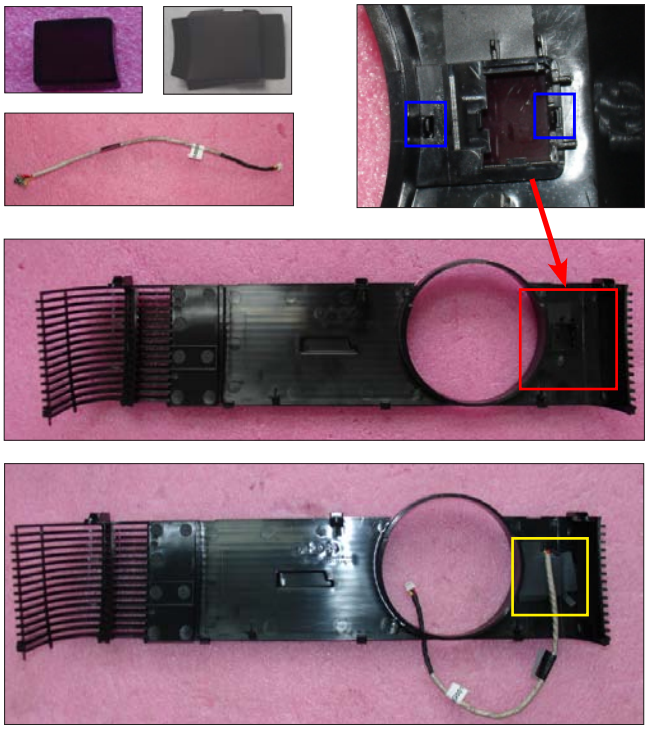


6. Assemble the System Fan Module.
7. Screw 7 screws (as yellow circle).
8. Plug 2 connectors (as green square).

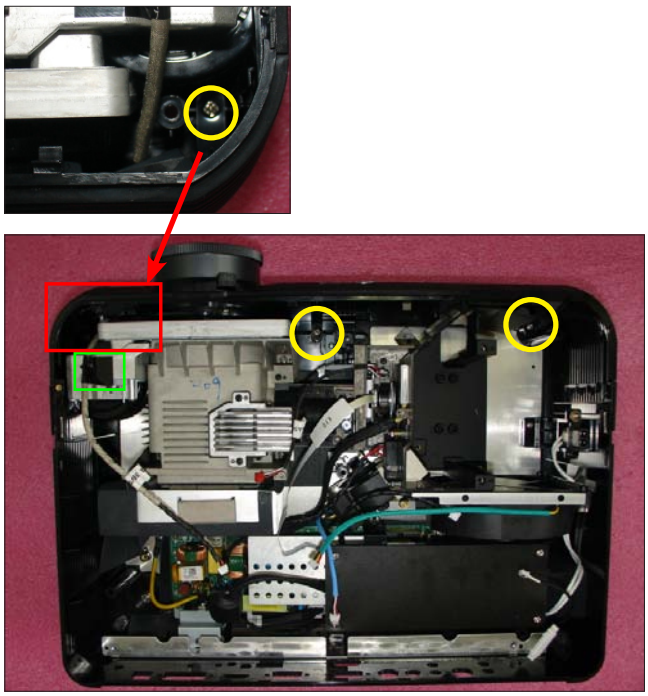


2-30 Assemble Front Cover Module

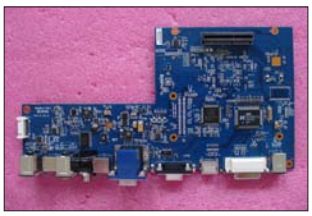
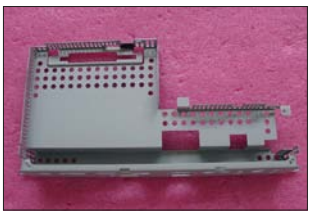
1. Fasten 2 tenons (as blue square) to assemble IR Lens.
2. Stick black mylar (as yellow square) to assemble IR Board.

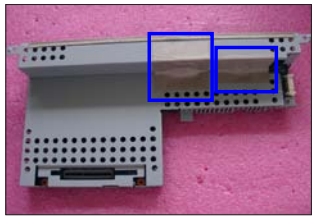


3. Assemble the Front Cover Module.
4. Screw 3 screws (as yellow circle).
5. Stick 3M tape (as green square).

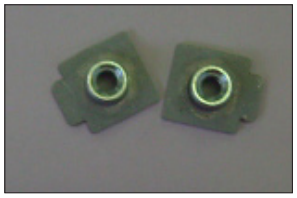


2-31 Assemble Main Board Module

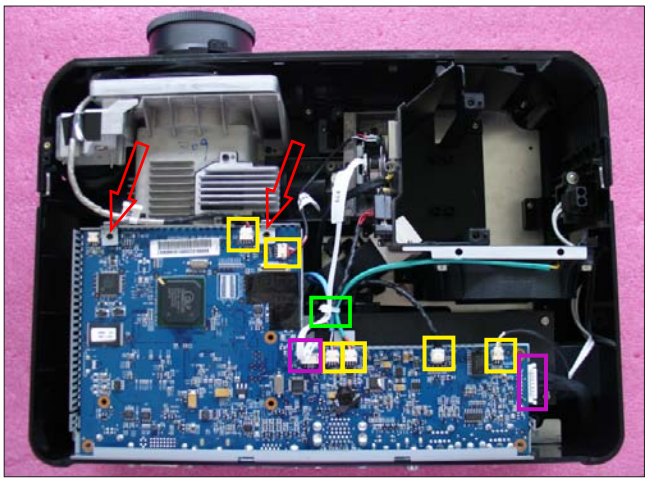





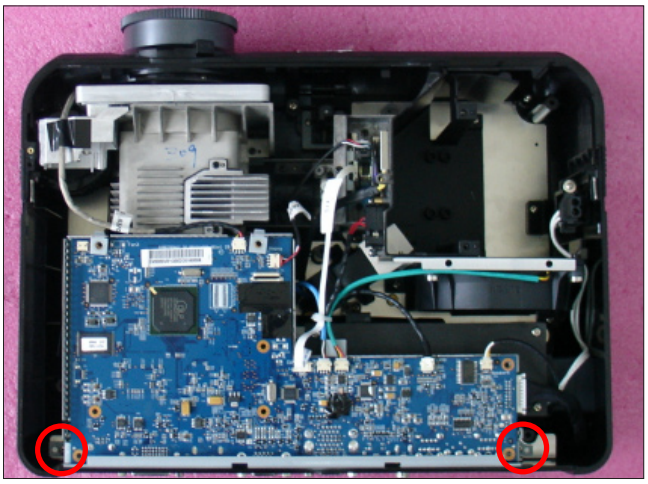
1. Stick 2 EMI tapes (as blue square) to assemble Main Board and Main Board Bottom Shielding.
2. Assemble the Main Board Module.



3. Plug 6 connectors (as yellow square).
4. Plug 2 connectors (as purple square) to assemble the Color Wheel cable and Lamp Driver to Main Board cable.
5. Tie the cables with cable tie (as green square).
6. Assemble 2 Main Board Bottom Shielding Brackets (as red arrows point).

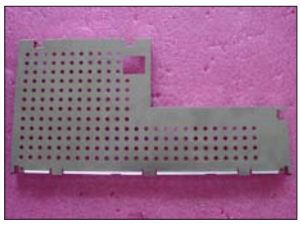


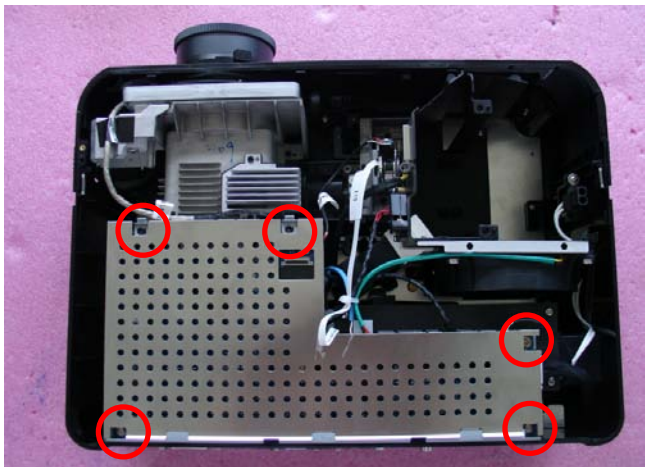
7. Screw 2 screws (as red circle).
8. Screw 8 hex screws (as green circle).



2-32 Assemble Main Board Top Shielding

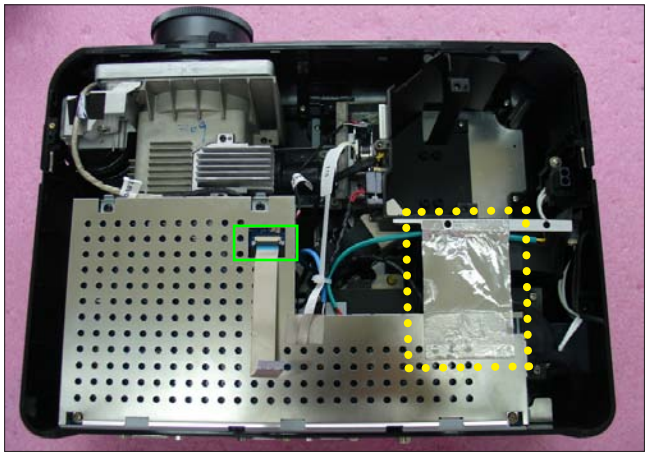
1. Screw 5 screws (as red circle) to assemble the Main Board Top Shielding.





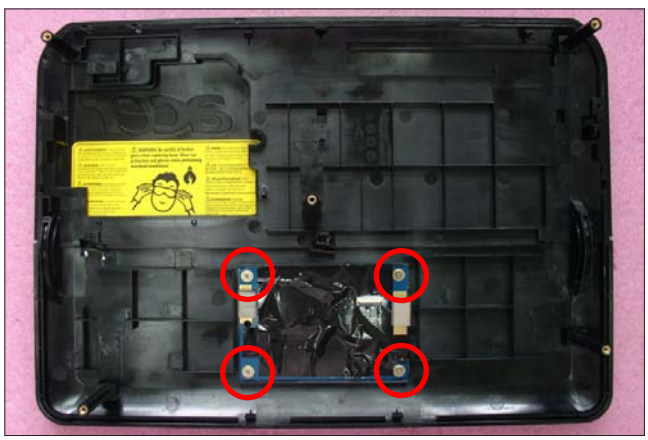
2. Stick the Heatsink Aluminum (as yellow dot square).

3. Plug 1 connector (as green square) to assemble the FPC cable.



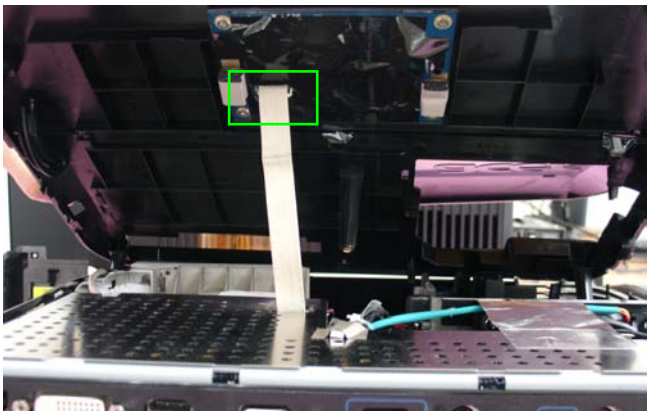
2-33 Assemble Keypad Board Module

1. Screw 4 screws (as red circle) to assemble the Keypad Board Module.



2-34 Assemble Top/Lamp Cover Module

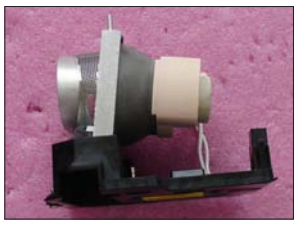
1. Assemble the Top/Lamp Cover Module.
2. Plug the connector (as green square).



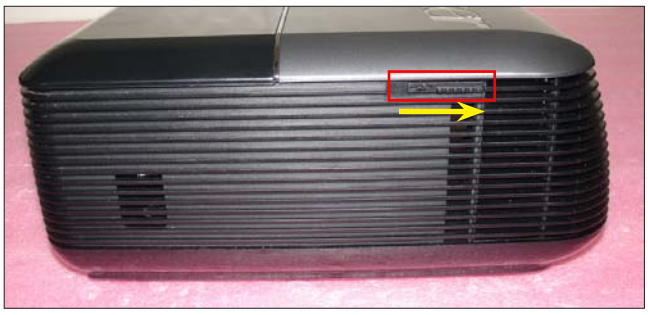
2. Screw 1 screw (as yellow circle)
3. Screw 5 screws (as red circle) on the Bottom Cover.

2-35 Assemble Lamp Module

1. Assemble the Lamp Module.
2. Tighten 3 screws (as red circle) on the Lamp Module.
3. Pull downword the Lamp Cover Module slightly (as blue arrows point).



4. Push the two clips (as red square) as yellow arrows point on the left/right side of the projector.



Chapter 3

Troubleshooting

3-1 LED Lighting Message

Message	Lamp LED	Temp Led	Power LED	
	Red	Red	Red	Blue
Standby (power cord plugged in)	--	--	V	--
Power button ON	--	--	--	V
Lamp retry	--	--	--	Quick flashing
Turning off (cooling state)	--	--	Quick flashing	--
Turning off (cooling completed)	--	--	V	--
Error (thermal failure)	--	V	--	V
Error (fan failure)	--	Quick flashing	--	V
Error (lamp failure)	V	--	--	V
Error (color Wheel failure)	Quick flashing	--	--	V

Note: Steady Light: "V"

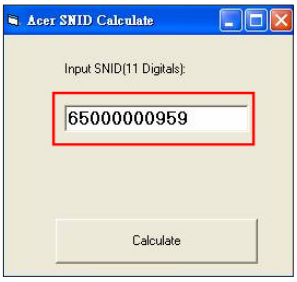
No Light: "--"

3-2 Main Procedure

No	Symptom	Procedure
1	No Power	- Ensure the Power Cord and AC Power Outlet are securely connected - Ensure all connectors are securely connected and aren't broken - Check LVPS - Check Lamp Driver - Check Main Board
2	Auto Shut Down	- Check LED Status a. Thermal/Fan Failure: Temp LED (lights or flashes red), Power LED (lights red) - Check Thermal Switch - Check Fan - Check Main Board b. Lamp Failure: Lamp LED (lights red), Power LED (lights blue) - Check Lamp - Check Lamp Driver - Check Main Board c. Color Wheel Failure: Lamp LED (flashes red), Power LED (lights blue) - Check Color Wheel - Check Photo Senor - Check Main Board
3	No Light On	- Ensure all connectors are securely connected and aren't broken - Check Lamp Cover - Check Interrupt Switch - Check Lamp Module - Check Lamp Driver - Check LVPS - Check Main Board - Check Color Wheel - Check Photo Sensor Board

No	Symptom	Procedure
4	No Image	- Ensure the Signal Cable and Source work (If you connect multiple sources at the same time, use the "Source" button switch) - Ensure all connectors are securely connected and aren't broken - Check Main Board - Check DMD Board - Check DMD Chip - Check Engine Module
5	Mechanical Noise	- Check Color Wheel - Check Fan Module
6	Line Bar/Line Defect	- Check if the Main Board and the DMD Board are assembled properly - Check Main Board - Check DMD Board - Check DMD Chip
7	Image Flicker	- Do "Reset (All data)" of the OSD Menu - Ensure that the signal cables and source are work as well - Check Lamp Driver and waveform - Check Lamp Module - Check Color Wheel - Check Photo Sensor and clean Photo Sensor - Check DMD Board - Check Main Board
8	Color Abnormal	- Do "Reset (All data)" of the OSD Menu - Adjust Color Wheel Index - Check Main Board - Check DMD Board - Check Color Wheel

No	Symptom	Procedure
9	Poor Uniformity/ Shadow	- Ensure the projection screen without dirt - Ensure the projection lens is clean - Ensure the Brightness is within spec - Check rod alignment - Check Engine Module
10	Dead Pixel/Dust (Out of spec.)	- Ensure the projection screen without dirt - Ensure the projection lens is clean - Clean DMD Chip and Engine Module - Check DMD Chip - Check Engine Module
11	Garbage Image	- Ensure that the signal cables and source work as well - Check Main Board - Check DMD Board
12	Remote Controller/Control Panel Failed	- Remote Controller a. Check Battery b. Check Remote Controller c. IR receiver d. Check IR Sensor Board e. Check Main Board - Control Panel a. Check FPC b. Check Keypad Board c. Check Main Board
13	Function Abnormal	- Do "Reset (All data)" of the OSD Menu - Check Main Board
14	Audio Abnormal	- Ensure that the signal cables and source are work as well - Ensure that your Projector is not in “Mute” mode - Check Main Board - Check Speaker

No	Symptom	Procedure
15	Forgetting Password (administrator Password)	- An unique Universal Password which is printed on the Security Card. This unique password is a back door of Administrator Password which will be accepted by projector anytime no matter what the Administrator Password is. - If you forget the Password, please do the following steps to get the Universal Password: (1) Click the "AcerSNID" (2) Input SNID number. (SNID number is on the Security Card)  (3) Click "Calculate". Then the Universal Password will appear.
16	Universal Password Failure	- Please confirm whether the SNID number of Service Mode is the same as the SNID number on the backside of projector? - If not, please do the actions as below: a. Execute the EDID Upgrade Procedure (refer to Chapter 6) b. Execute "Un-lock SNID and Default Language Reset" (refer to 6-7 of Chapter 6) c. Press "Power", "Left", "Left" and "Menu" buttons sequentially to get into Service Mode to obtain the SNID number, then calculate the Universal Password.

No	Symptom	Procedure
17	Network Function Abnormal (only for P5271i)	- Ensure you use the right LAN cable. - Ensure RJ45 Connector work well (after joining RJ45 line, Green LED and Red LED of RJ45 Port will light). - Check Internet Source and Wireless Module if LED message is in abnormal status. - Check Main Board if LED message is in normal status.
18	Wireless Function Abnormal (only for P5271i)	- Ensure setting on projector and PC (Laptop) are correct. - Ensure the signal strength of wireless network connection is good enough. - Check Wireless Module - Check Main Board

3-3 Beep Sound

No	Scenario	Beep sound definition
1	Power on (as soon as power button pressed)	So(0.3s)
2	Power on (lamp lighting failed)	2 x {So(0.1s) – Off(0.1s)} per lighting failure 12s interval for each trial lighting. Max 4 times of trial
3	Power on (lens cap was not opened, for the model with sliding lens cover only)	2 x {So(0.1s) – Off(0.1s)} periodically per 3 seconds, Totally 5 cycles. Turn off projector after 5 cycles.
4	Close lens cap while projector is operating (for the model with sliding lens cover only)	2 x {So(0.1s) – Off(0.1s)} periodically per 3 seconds, Totally 5 cycles. Turn off projector after 5 cycles.
5	Power off (power button pressed twice)	So(0.3s)
6	Fan lock	So(0.1s) periodically per second
7	Overheat	2 x {So(0.1s) – Off(0.1s)} periodically per second
8	Lamp error	3 x {So(0.1s) – Off(0.1s)} periodically per second
9	Lamp Life reminding	3 x {Do(0.2s) – Off(0.8s) – So(0.2s) – Off(0.8s)} with reminding message
10	Presentation Timer (time is up)	3 x {Do(0.1s) – Off(0.9s)} - So(0.5s)

Chapter 4

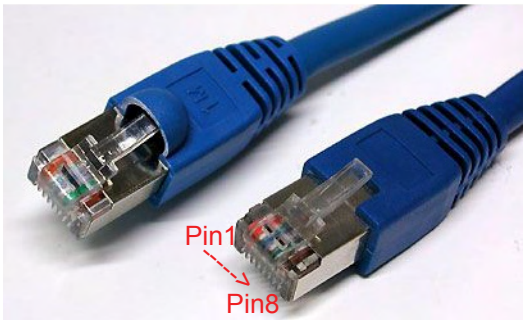
Function Test & Alignment Procedure

4-1 Test Equipment Needed

- IBM PC with SVGA/XGA resolution
- DVD player with Multi-system, equipped "Component", "S-Video","Composite" and "HDMI".
- HDTV Source (480P, 720P, 1080i, 1080P)
- Minolta CL-100
- Quantum Data 802B or CHROMA2327 (Color Video Signal & Pattern Generator)

4-2 Introduction of LAN Cable(only for P5271i)

If you use P5271i network function, you have to use the special LAN cable with one end adopts special connection method: the wires of Pin 2 and Pin 6 are exchanged.(the order of Pin1 to Pin8 is as right picture)



4-3 Service Mode

1. Turn on the projector
2. Do the following actions sequentially to get into Service Mode
   (1) Press "Power", "Left", "Left" and "Menu" buttons sequentially.
   (2) Service Mode will be shown.
   (3) Choose "Exit" to leave the Service Mode after confirming the configuration.

4-4 OSD Reset

1. After final QC step, we have to erase all saved change again and restore the OSD default setting. The following actions will allow you to erase all end-users' settings and restore the default setting:

(1) Please get into OSD menu.

(2) To execute "Reset" function.

4-5 Test Condition

- Circumstance brightness: Dark room less than 2.0 lux.

- Inspection distance: 1.8 m~2.5 m functional inspection.

- Screen size: 60 inches diagonal.

- After repairing each unit, it should be Run-in (refer to the below table).

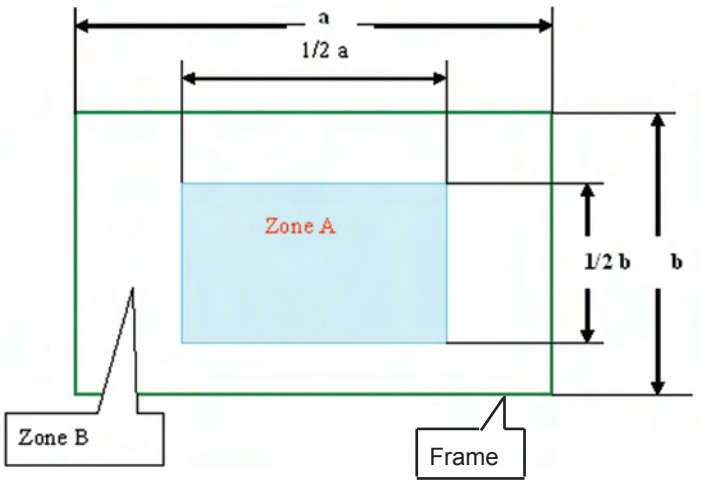
Symptom	Run-in Time
Normal repair	2 hours
NFF	4 hours
Auto shutdown	6 hours

- Get into Burn-In Mode

** Cycle setting is based on the defect symptoms. ie: If it is NFF, the run-in time is 4 hours. You have to set the lamp on for 50 min. and lamp off for 10 min for 4 cycles.*

Press power→ left → left → menu	
Choose Burn In > enter	
Lamp On (Min)	Press right key to adjust the time (50)
Lamp Off (Min)	Press right key to adjust the time (10)
Set Burning cycle	Press right key to adjust the cycle
After setting up the time, choose "Enter into Burn In Mode" and press "Menu" button.	

Screen Defects (While replacing DMD Chip, DMD Board, Main Board)



< Figure: Zone A, Zone B & Frame (as green line) Definition, Active area=Zone A+ Zone B >

Defect specification table

Order	Symptom	Pattern	Criteria
1	Bright pixel (dots)	Gray 10 pattern	A+B≤1
2	Dark pixel (dots)	White pattern	A+B ≤ 6
3	Bright blemish	Gray 15 pattern	A+B ≤ 10
4	Dark blemish	Blue 60 pattern	A+B ≤ 10
5	Bright dot on frame	Gray 10 pattern	≤ 1
6	Unstable pixel	White & Black pattern	A+B ≤ 1
7	Adjacent dark pixel	White & Black pattern	A+B = 0

4-6 Test Inspection Procedure

Update	Change parts							
	Main Board	Firmware	Color Wheel	Lamp Module	Engine Module	EDID	Lamp Driver	Lamp Blower
Version Update	v	v				v		
Color Wheel Index	v		v					
PC Calibration	v	v						
Reset Lamp Hour				v				
OSD Reset	v	v						
EDID	v							
Re-write Lamp Hour Usage	v							
Reset Default Language	v	v				v		
Rod adjustment					v			
Waveform Download (for P5271/P5271i)							v	
Restore Blower Speed	v	v						v

Note: - If Color appears abnormal after changing Main Board Module, please do Color Wheel index adjustment.

- After changing parts, check the information above table.

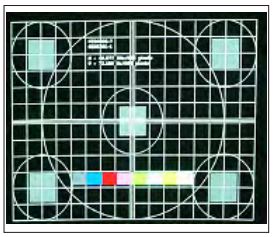
4-7 PC MODE

Note: - When getting into function test, adjust "lens shift" to guarantee the lens at the highest state and the image maximum, and adjust the focus to guarantee the image at the clearest, then start test.

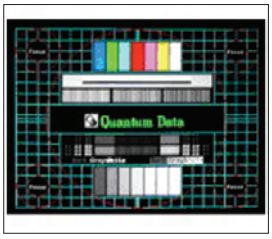
1. Frequency and Tracking Boundary

Procedure

- Test equipment: video generator
- Test signal: analog 1024 x 768@60Hz (for P5271/P5290/P5271i);
  1280 x800@75H (for P5390W)
- Test Pattern: General-1 or Master
- Check and see if the image sharpness is well performed.
- If not, re-adjust by the following steps:
  (1) Select "Frequency" function to adjust the total pixel number of pixel clock in one line period.
  (2) Select "Tracking" function and use right or left arrow key to adjust the value to minimize video flicker.
- Adjust Resync or Frequency/Tracking/H. Position/V. Position to the inner screen.



General-1



Master

Inspection item

- Eliminate visual wavy noise by Resync, Frequency or Tracking selection.
- Check if there is noise on the screen.
- Horizontal and vertical position of the video should be adjustable to the screen frame.

Criteria

- If there is noise on the screen, the product is considered as failure product.
- If there is noise on the screen, use auto or manual "frequency" function or "tracking" function to adjust the screen.
- The PC mode functionally sure be workable include support format with frequency and auto detected functional will be workable.

2. Bright Pixel

Procedure

- Test equipment: video generator

- Test signal: analog 1024 x 768@60Hz (for P5271/P5290/P5271i);
  1280 x800@75H (for P5390W)
- Test Pattern: Gray 10

Inspection item
- Bright pixel check.

Criteria
- Bright pixel should be no more than 1 under gray 10 pattern.
- Adjacent pixels are unacceptable.
- Ref. Defect specification table

Gray 10

3. Dark Pixel

Procedure
- Test equipment: video generator
- Test signal: analog 1024 x 768@60Hz (for P5271/P5290/P5271i);
  1280 x800@75H (for P5390W)
- Test Pattern: Full white

Inspection item
- Dark pixels check.

Criteria
- The dark pixel should be no more than 6 under full white pattern.
- Adjacent pixels are unacceptable.
- Ref. Defect specification table

Full white

4. Bright Blemish

Procedure
- Test equipment: video generator
- Test signal: analog 1024 x 768@60Hz (for P5271/P5290/P5271i);
  1280 x800@75H (for P5390W)
- Test Pattern: Gray 15

Inspection item
- Bright blemish check.

Criteria
- The bright blemish should be no more than 10 under gray 15 pattern.
- Ref. Defect specification table

Gray 15

5. Dark Blemish

Procedure
- Test equipment: video generator
- Test signal: analog 1024 x 768@60Hz (for P5271/P5290/P5271i);

1280 x800@75H (for P5390W)

- Test Pattern: Blue 60

Inspection item
- Dark blemish check.

Criteria
- The dark blemish should be no more than 10 under blue 60 pattern.
- Ref. Defect specification table

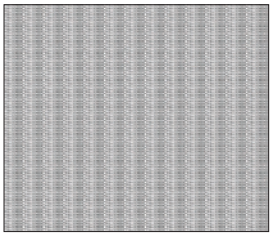
Blue 60

6. Focus Test

Procedure
- Test equipment: video generator
- Test signal: analog 1024 x 768@60Hz (for P5271/P5290/P5271i);
  1280 x800@75H (for P5390W)
- Test Pattern: Full screen

Inspection item
- Focus check

Criteria
- From screen 2 M via visual to check the focus, look at the entire screen, focus shall be clear, crisp, and sharp over the entire surface of the display pattern. (Blur word on one of the corner after adjustment is acceptable. However, the word should at least be recognizable.)



Full screen

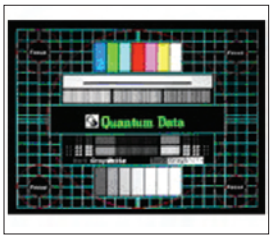
7. Color Performance

Procedure
- Test equipment: video generator.
- Test signal: 480p, 720p, 1080p
- Test Pattern: Master, 64 gray RGBW or SMPTE bar

* Please refer to 4-2 to get into service mode. Use 720p & 1080p signal, master pattern to do HDTV test. Color cannot discolor to purple and blue.

Inspection item
- Check if each color level is well-functioned.
- Color saturation

Criteria
- Screen appears normal. It should not have any abnormal condition, such as lines appear on the screen and so on.
- Color appears normal.
- It is unacceptable to have few lines flashing.
- RGBW should all appear normal on the screen and sort from R -G-B-W.
- Color levels should be sufficient and normal. (The unidentified color levels on both left and



Master

64 gray RGBW

SMPTE BAR

right sides should not over 4 color levels.)

- Gray level should not have abnormal color or heavy lines.
- If color appears abnormal, please get into service mode to do color wheel index adjustment.

4-8 PC Calibration

Procedure

- Test equipment: video generator
- Once Main Board is changed. PC Calibration should be done as well.

(1) Test signal analog: 1024 x 768 @60Hz (for P5271/P5290/P5271i);
1280 x800@75H (for P5390W)

(2) Test Pattern: White (up) Black (down)

- Note

(1) Calibration pattern should be in full screen mode.

(2) Please press "Power", "Left", "Left" and "Menu" buttons sequentially to get into Service Mode.

(3) Choose "Analog Settings", press "Menu" button to access "PC Calibration" for correction. Choose "Exit" to leave the Service Mode.

White/Black

Check pattern

- Test signal: 1024 x 768 @60Hz (for P5271/P5290/P5271i);
1280 x800@75H (for P5390W)
- Test pattern: 64 gray RGBW

* After finishing ADC adjustment, check 64 gray RGBW pattern.

64 gray RGBW

Inspection item

- Color saturation

Criteria

- There should not have any lack of RGBW. The color should appear normal and sort in right order.
- Color levels should be sufficient and normal. (the unidentified color levels on both left and right sides should not over 8 color levels.)

4-9 Video Performance

1. CVBS

Procedure	- Test equipment: DVD player
	- Test signal: CVBS
Inspection item	- Video performance test
Inspection Distance	- 1.8M ~2.5M
Criteria	- Check any abnormal color, line distortion or any noise on the screen.
	- Check the sound from speaker.

Motion video

2. S-Video

Procedure	- Test equipment: DVD player
	- Test signal: S-Video
Inspection item	- Video performance test
Inspection Distance	- 1.8M ~2.5M
Criteria	- Check any abnormal color, line distortion or any noise on the screen.
	- Check the sound from speaker.

3. HDTV/Component

Procedure	- Test equipment: DVD player
	- Test signal: Ycbcr/YPbPr
Inspection item	- HDTV performance test
Inspection Distance	- 1.8M ~2.5M
Criteria	- Check any abnormal color, line distortion or any noise on the screen.
	- Check the sound from speaker.

4. Audio Test

Procedure	- Test equipment: DVD player
	- Test signal: CVBS
Inspection item	- Audio performance test
Inspection Distance	- 1.8M ~2.5M

Criteria	- Check the sound from speaker. - Check "Volume" is normal - Check "Mute" is normal

5. HDMI Test

Procedure	- Test Signal : 720p,1080i - Test Pattern : Any Pattern - Equipment: DVD Player with HDMI output - Display type must be set to 16:9
Inspection item	- HDMI Test
Inspection Distance	- 1.8M ~2.5M
Criteria	- Ensure the image and audio are well performed and the color can not discolor.

4-10 Optical Performance Measure

Inspection Condition
- Environment luminance: 2 Lux - Product must be warmed up for 3 minutes - Distances from the screen: 2 M (for P5271/P5290/P5271i); 1.8M (for P5390W) - Screen Size: 60 inches diagonal

1. Test equipment

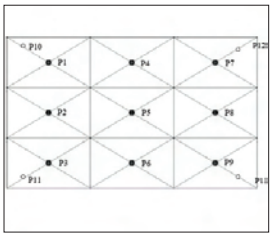
Procedure	- Connect VGA IN port of Projector with VGA port of Chroma by VGA cable, press "Menu" button, get into OSD mode, the settings are as below: - "Display mode" is "Bright", "Brightness" is "50" the "Format" is "4:3" (for P5271/P5290/ P5271i);"16:9" (for P5390W), and "ECO Mode" is "Off".

2. Brightness

Procedure
- Full white pattern
- Use CL100 to measure brightness values of P1~P9.
- Follow the brightness formula to calculate brightness values.

☼ Brightness Formula

Avg. (P1~P9)*1.1m^2



Full white pattern

Criteria
- 1300 ANSI lumen (for P5271/P5271i)
- 1750 ANSI lumen (for P5290/P5390W)

3. Full On/Full Off Contrast

Procedure
- Full white pattern & full black pattern
- Use CL100 to measure brightness values of full white pattern P5 & full black pattern B5
- Follow Contrast formula to calculate contrast values.

☼ Contrast Formula

P5/B5

Note: P5 = Lux of center in full white pattern

B5 =Lux of center in full black pattern

Full black pattern

Criteria
- 2800: 1 (for P5271/P5271i/ P5290/P5390W)

4. Uniformity

Procedure
- Full white pattern
- Use CL100 to measure brightness values of P1~P9 (see image: full white).
- Follow the Uniformity formula to calculate average values.

☼ Uniformity Formula

JBMA Uniformity = Avg. (P1, P3, P7, P9)/P5X100%

Criteria
- 65%

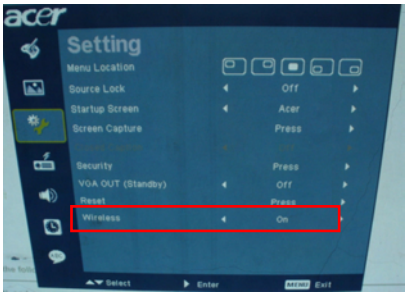
4-11 Network Function Test (Only for P5271i)

1. Projector Setting

(1) Power on projector.

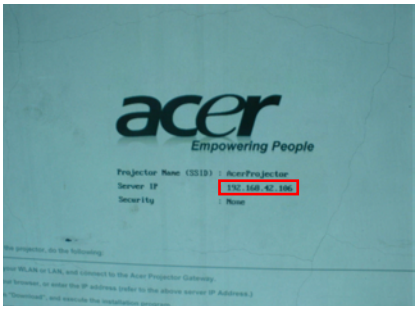
(2) Press “Menu” to get into OSD Mode.

(3) Select “Setting ->Wireless”, choose “On”



(4) Record projector IP address through projected image (Record IP address: 192.168.42.106).

(5) Connect projector with PC by LAN cable (please refer to 4-2).



2. PC Setting

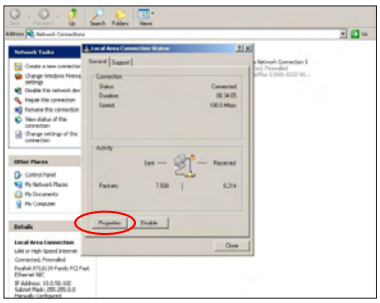
(1). Double click the "Local area connection".

- Click "Properties".

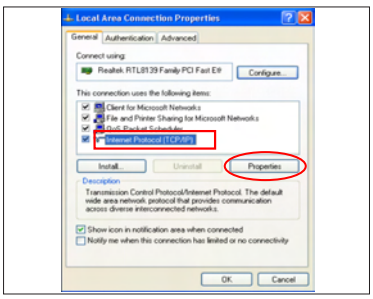
(2). Select "Internet protocol (TCP/IP)".

- Click "Properties".

2. (1)



2. (2)

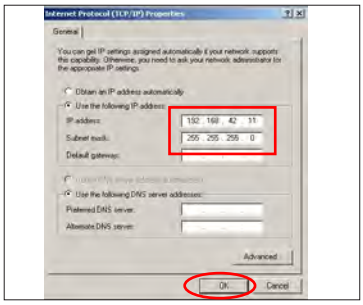


(3). Modify the IP address to 192.168.42.11
Modify Subnet mask to 255.255.255.0(as red square).

Note: The HOST ID (192.168.42.XXX) of PC IP address must be different from the projector IP address recorded down in 4-11-1.

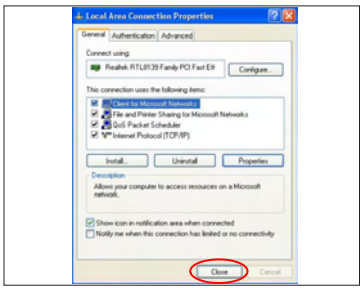
- Click "OK".

2. (3)



(4). Click "Close" to exit the setting screen.

2. (4)



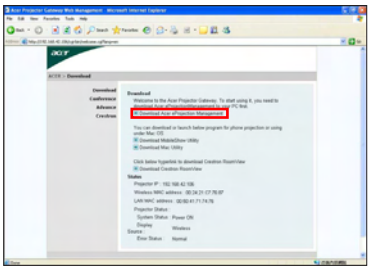
3. Test Procedure

(1). Execute "Internet Explorer".

3. (1)

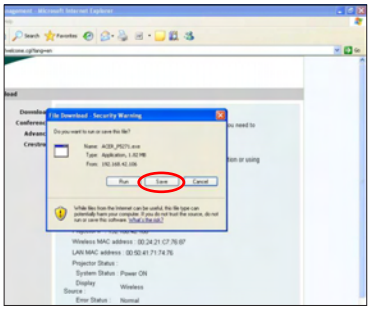
(2). Visit the IP address:http://192.168.42.106,then click "Download Acer eProjection Management".

3. (2)



(3) Click "Save".

3. (3)



(4) Click “Save” to save the “Acer_P5271.exe” on the destop.

3.(4)

(5) Double click “Acer_P5271.exe” on the destop.

3.(5)

(6) Click “Next”.

3.(6)

(7) “Acer Projector Gateway P5271i” will shown on the desktop. then double click it.

3.(7)

(8) Click “Ok”.

3.(8)

Empowering Technology - Acer eProjection Management
Searching for Acer Projectors...
Please enter login information:
Username:
You can also enter a projector IP address manually to connect an unrecognized projector by clicking the "Enter IP..." button.
Enter IP...
OK
Cancel

(9) The software window will show as right picture is enough, check if the projection image is same as PC screen.

3.(9)

4-12 Wireless Function Test (Only for P5271i)

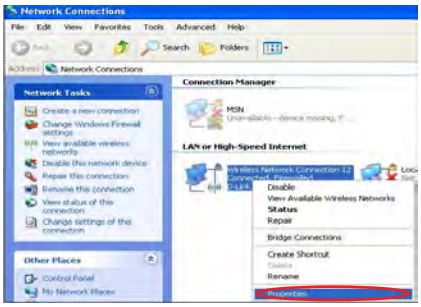
1. Projector Setting

-The setting procedure is same as 4-11-1.

2. PC Setting

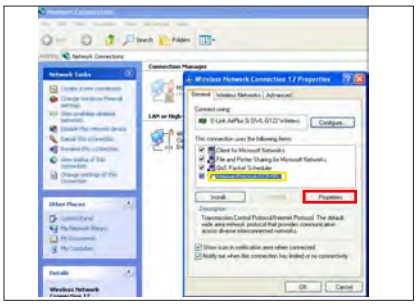
(1). Right click the "Wireless Network Connection".

- Click "Properties".



(2). Select "Internet protocol (TCP/IP)".

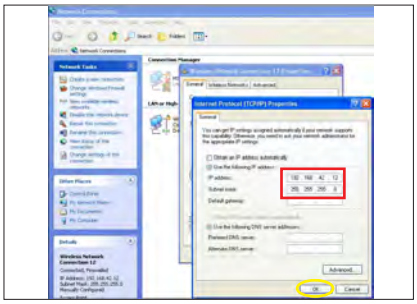
- Click "Properties".



(3). Modify the IP address to 192.168.42.12
Modify Subnet mask to 255.255.255.0(as red square).

Note: The HOST ID (192.168.42.XXX) of PC IP address must be different from the projector IP address recorded down in 4-11-1.

- Click "OK".

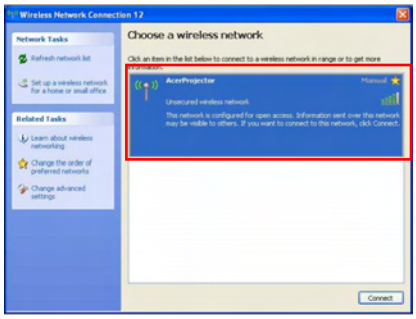


(4) Click "OK".

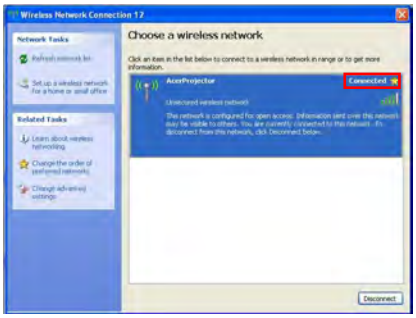
(5) Right click the "Wireless Network Connection".

- Click "View Available Wireless Networks".

(6) Double click “Acer Projector” to connect the Wireless Module.



(7)Message “Connected” appears on the screen.



2. Test Procedure

Test Procedure for Network function test and Wireless function test is the same, please refer to *4-11-3*.

4-13 Others

1. Function Inspection

General - All OSD functions must be checked for functionality. When OSD menu is displayed, there shall be no visible peaking, ringing, streaking, or smearing artifacts on the screen.

Factory Default - The factory settings (with appropriate centering, size, geometry distortion, etc.) shall be displayed upon “Recall” is selected from OSD.

Display Size - All preset modes shall expand to full screen size using OSD Horizontal and Vertical Size controls.

Display Data Channel (DDC) - The purpose of the DDC test is to verify the DDC1/DDC2B operation of the projector and to verify Plug & Play function.

Acoustic - High pitch sound from cooling fan and color wheel is unacceptable.

2. Check points for exterior and print pattern

Check item	Check point
Text & Pattern	Missing letters & pattern or blurry prints are unacceptable.
Exterior	Dirt, scrape, water ripples and uneven color are unacceptable.
Focus ring	Focus ring is functioning smoothly.
Logo	Missing logo, missing prints and blurry prints are unacceptable
Screw	All screws should be fixed and in right type.
Pedestal	Well-functioned
Lamp Cover	It should be locked in the correct place.
Plastic Parts	All plastic parts can not be broken and damaged.
Safety or warning label	All safety and warning labels should be visible, including all contents.
Connector	All interface connectors should be complete and workable.

Chapter 5

Firmware Upgrade

Section 1: System Firmware Upgrade (for all models)

5-1-1 Equipment Needed

Software: (DDP 2431- USB)

- DLP Composer Lite 9.2
- Firmware (*.img)
- Library file (P5271 P5290 FlashDeviceParameters) (library file has to put in PC and set right path in 5-5 step 3)

Note: - Please download "DLP Composer Lite 9.2" and "P5271 P5290 FlashDeviceParameters" from website to upgrade FW procedure.

Hardware:

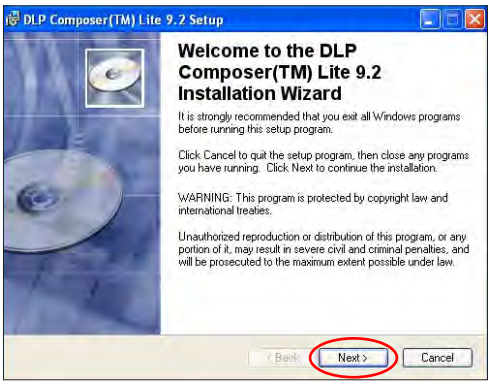
- Projector
- Power Cord: 42.50115G001
- USB Cable: 42.87304G001
- PC or Laptop

Note: - The FW upgrade procedure for P5290/P5390W/P5271i is the same as P5271, we take P5271 as an example here.

5-1-2 DLP Composer Lite Setup Procedure

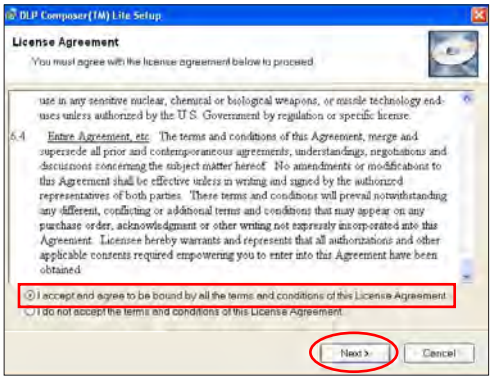
1. Choose "DLP Composer Lite V9.2 Setup" Program.

2. Click "Next".

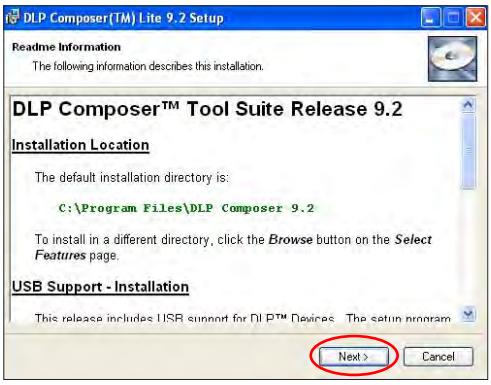

DLP Composer(TM) Lite 9.2 Setup
Welcome to the DLP Composer(TM) Lite 9.2 Installation Wizard
It is strongly recommended that you exit all Windows programs before running this setup program.
Click Cancel to quit the setup program, then close any programs you have running. Click Next to continue the installation.
WARNING: This program is protected by copyright law and international treaties.
Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.
< Back
Next >
Cancel

3. Read "License Agreement".

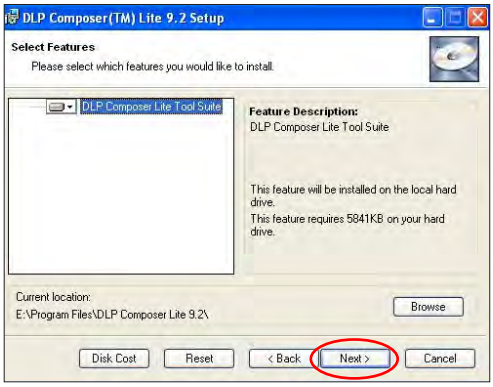
   - Choose "I accept and agree to be bound by all the terms and conditions of this License Agreement".
   - Click "Next".


DLP Composer(TM) Lite Setup
License Agreement
You must agree with the license agreement below to proceed.
I accept and agree to be bound by all the terms and conditions of this License Agreement.
I do not accept the terms and conditions of this License Agreement.
Next >
Cancel

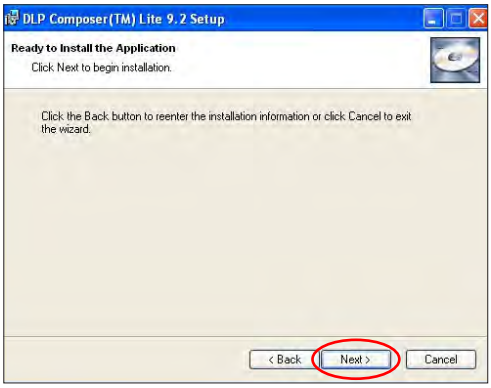
4. Click "Next".


DLP Composer(TM) Lite 9.2 Setup
Readme Information
The following information describes this installation.
DLP Composer™ Tool Suite Release 9.2
Installation Location
The default installation directory is:
C:\Program Files\DLP Composer 9.2
To install in a different directory, click the Browse button on the Select Features page.
USB Support - Installation
Next >
Cancel

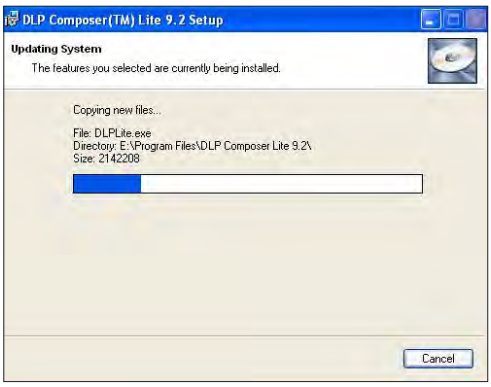
5. Click "Next".


DLP Composer(TM) Lite 9.2 Setup
Select Features
Please select which features you would like to install.
DLP Composer Lite Tool Suite
Feature Description:
DLP Composer Lite Tool Suite
This feature will be installed on the local hard drive.
This feature requires 5841KB on your hard drive.
Current location:
E:\Program Files\DLP Composer Lite 9.2\
Browse
Disk Cost
Reset
< Back
Next >
Cancel

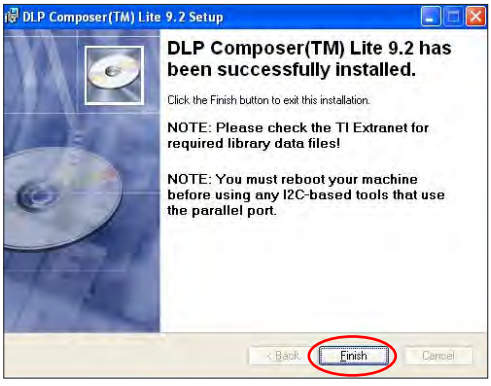
6. Click "Next".


DLP Composer(TM) Lite 9.2 Setup
Ready to Install the Application
Click Next to begin installation.
Click the Back button to reenter the installation information or click Cancel to exit the wizard.
< Back
Next >
Cancel

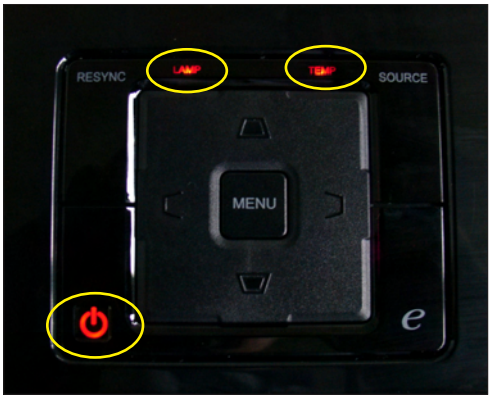
7. The program is executing "installing" status.



8. Click "Finish".


DLP Composer(TM) Lite 9.2 Setup
DLP Composer(TM) Lite 9.2 has been successfully installed.
Click the Finish button to exit this installation.
NOTE: Please check the TI Extranet for required library data files!
NOTE: You must reboot your machine before using any I2C-based tools that use the parallel port.
< Back
Finish
Cancel

5-1-3 Get into FW Download Mode



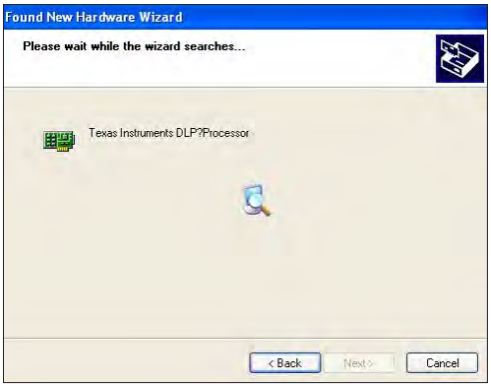
1. Set up

   - Hold on "Power" buttons and plug in the power cord.
   - After 5 seconds, the Power LED, Lamp LED and Temp LED will light red, then loosen "Power" button.
   - Connect projector with PC by USB cable.

Note: - The system fan and the lamp will not operate.

5-1-4 USB Driver Upgrade Procedure

Found New Hardware Wizard
(2)
Welcome to the Found New Hardware Wizard
This wizard helps you install software for:
Texas Instruments DLP?Processor
If your hardware came with an installation CD or floppy disk, insert it now.
(3)
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
(4)
< Back
Next >
Cancel



1. Execute Program

   (1) Connect projector with PC by USB cable.

   (2) "Found New Hardware Wiszard" picture will appear on the screen.

   (3) Select "Install the software automatically (Recommended)".

   (4) Click "Next".

   (5) Searching picture, please wait for several seconds.

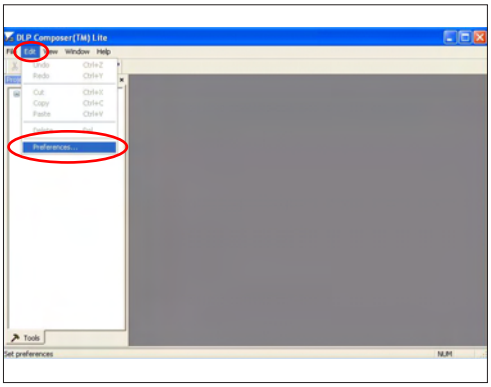
(6) Click "Finish", then the USB driver has been installed successfully.

Note: - If you have installed the USB driver, there is no need to perform this action.

5-1-5 Firmware Upgrade Procedure

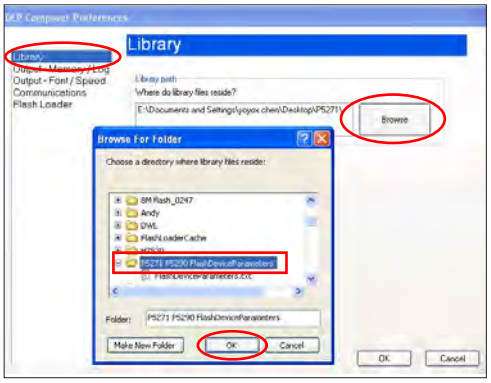
1. Execute the "DLP Composer™ Lite 9.2" file.

2. Click "Edit" and "Perferences".



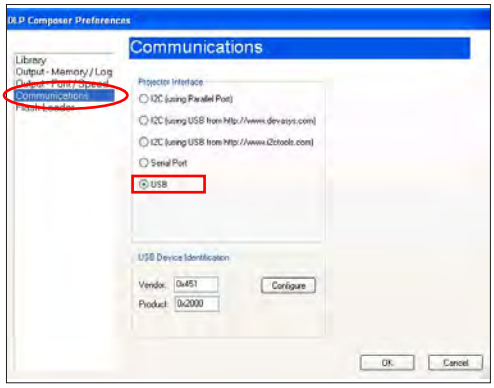
3. Click "Library".

   - Click the "Browse" and navigate to the directory where you put the Library files in.
   - Click "P5271 P5290 FlashDeviceParameters" folder.
   - Click "OK".



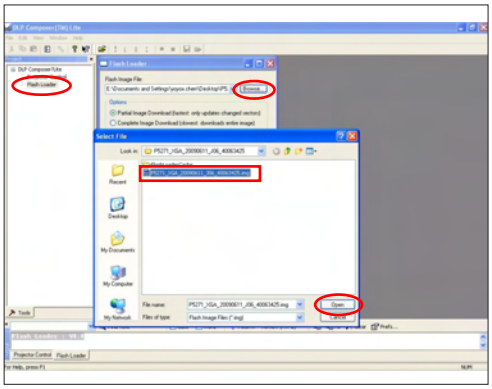
4. Click "Communications".

   - Select "USB".
   - Click "OK".



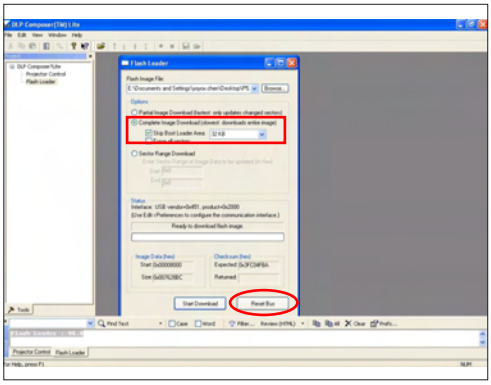
5. Choose "Flash Loader".

   - Click "Browse" to search the firmware file (*.img).
   - Click "Open".



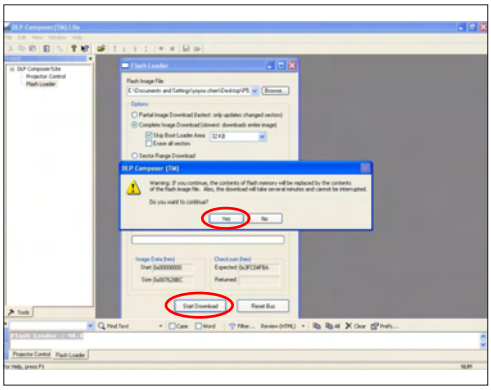
6. Select "Skip Boot Loader Area". (select "32KB").

   - Click "Reset Bus" to erase the flash memory.

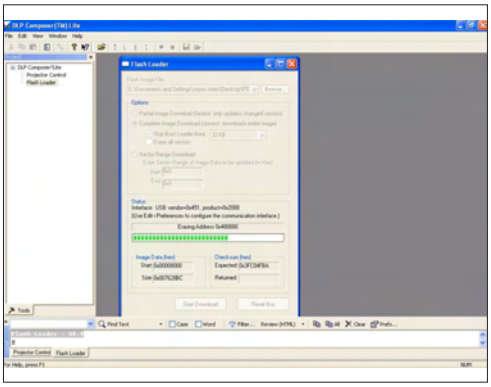


7. If the FW is ready, click "Start Download" to execute the firmware upgrade.

   - Click "Yes".



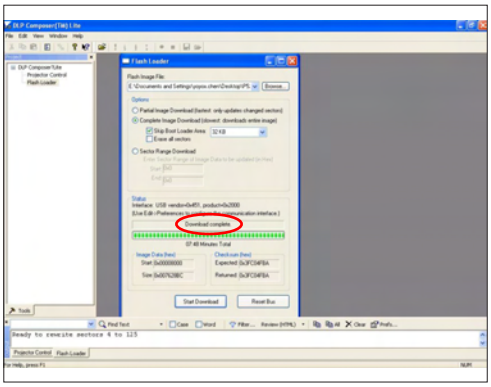
8. Proceeding Picture.



9. It takes about several minutes, the firmware upgrade process is finished, "Download completed" will appear on the screen.

   - The projector will automatically turn on.

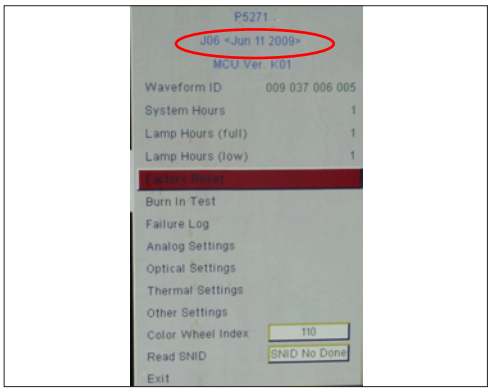
   - Unplug USB cable.



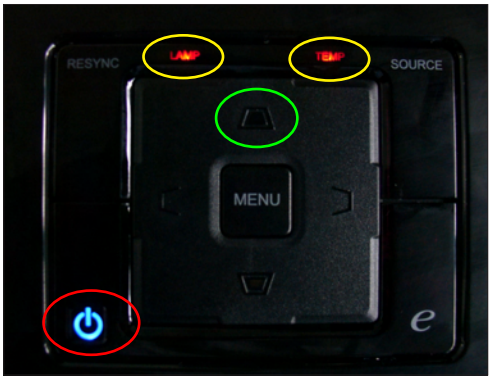
10. Check FW version.

   - Get into the service mode to check the firmware version.

     (To get into service mode, please press "Power", "Left", "Left" and "Menu" buttons sequentially.)



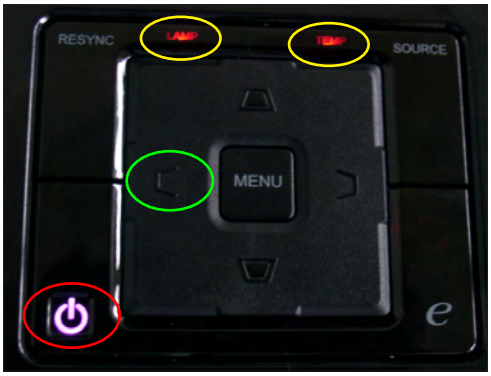
5-1-6 Waveform Download (for P5271/P5271i)



- Plug in power cord.
- Hold on the "Up" button, then press the "Power" button, the Power LED lights blue.
- Wait a moment, the Temp LED flashes red.
- After several seconds, the Lamp LED and Temp LED light red.
- Loosen the "Up" button.
- After that, the projector will automatically get into standby status.
- Waveform Download is completed.

Note: - This step must be executed after Lamp Driver changed.

5-1-7 Restore Blower Speed



- Plug in power cord.
- Hold on the "Left" button, then press the "Power" button.
- After about 2 seconds, the Power LED lights purple , the Lamp LED and Temp LED light red.
- The projector will be on and the message appears as the right picture shows.
- After about 70 seconds, the Lamp LED and Temp LED will be off, the Power LED will light blue.

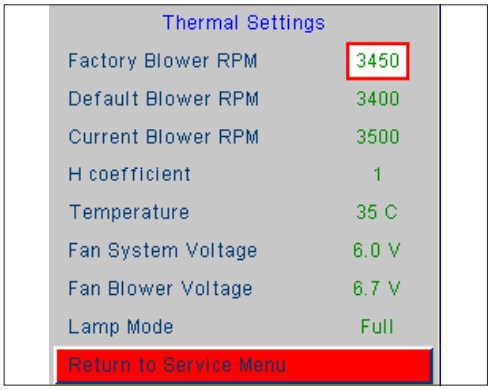
Saving Factory Blower RPM, Please Wait...
Warning: DO NOT unplug while the projector fan is still running
Empowering People

- Get into the service mode.
- Select "Thermal Settings" to check that the Blower Speed has been restored.

  (To get into service mode, please press "Power", "Left", "Left" and "Menu" buttons sequentially.)

- The procedure is completed.

  Note: - This step must be executed after changing FW, Main Board or Lamp Blower.



Section 2: Network/Wireless FirmWare Upgrade (only for P5271i)

5-2-1 Equipment Needed

Software :

- Network Program (*.bin)

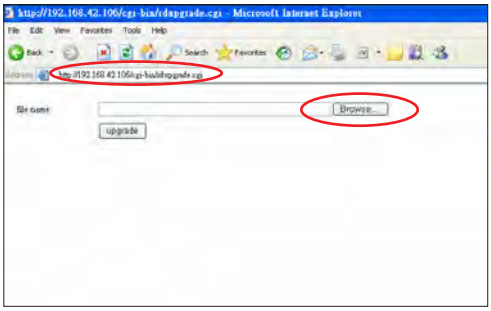
Hardware :

- Projector
- Power Cord (42.00106G001)
- LAN Cable
- PC or a Laptop with WLAN

5-2-2 Network/Wireless FW Upgrade Procedure

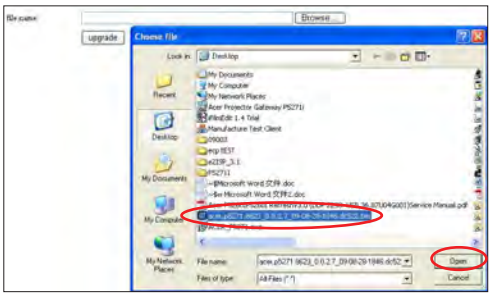
1. The connection setting of Network / Wireless (please refer to 4-11-1 and 4-11-2).

2.Execute internet explorer.



3. - Visit "http://192.168.42.106/cgi-bin/ rdupgrade.cgi".

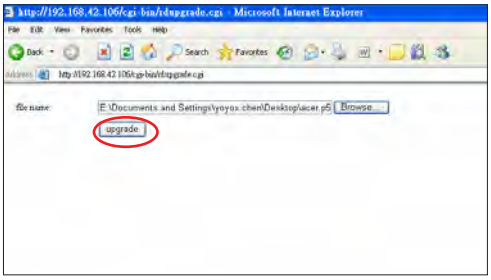
   - Click "Browse"



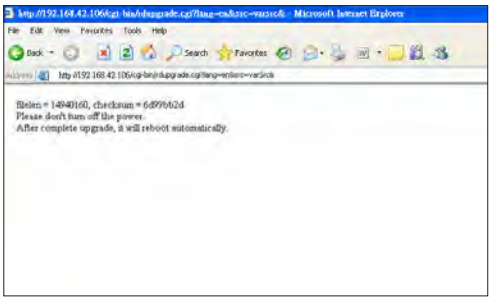
4. - Select the right firmware (*.bin).

   - Click "Open".

5. Click "Update".



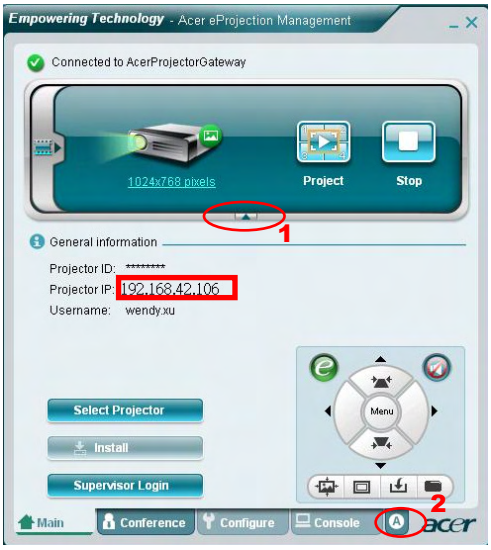
6. The screen will appear as right shows,and after complete, the projector will reboot automaticlly.



5-2-3 Check FW Version

1. Double click “Acer Projector Gateway P5271i” on the destop(setup the software, please refer to 4-11-3).

2. - Click button as the right picture shows 1, it will show Projector IP.
   - Click button as the right picture shows 2.



3. The screen of PC will appear FW's Version.

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Main
Conference
Configure
Console
acer

Chapter 6

EDID Upgrade

6-1 EDID Introduction

Extended Display Identification Data is a VESA standard data format that contains basic information about a display device and its capabilities, including vendor information, maximum image size, color characteristics, factory pre-set timings, frequency range limits, and character strings for the monitor name and serial number.

The information is stored in the display and is used to communicate with the system through a Display Data Channel (DDC), which sites between the display device and the PC graphics adapter. The system uses this information for configuration purposes, so the monitor and system can work together.

Note: - If a display device has digital input ports, like DVI or HDMI, but without EDID in its Main Board, the display device will show no image while the input source is digital signal.

- The EDID Upgrade procedure for P5290/P5390W/P5271i is the same as P5271, we take P5271 as an example here.

- After EDID upgrading, please execute "Default Language Reset".

6-2 Equipment Needed

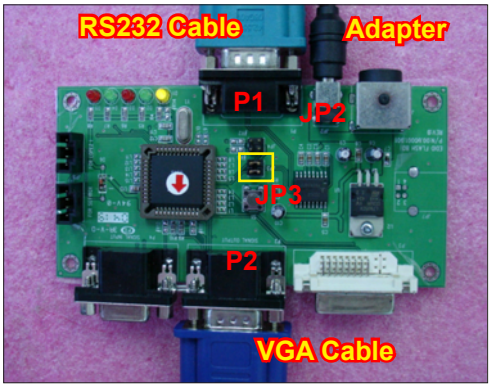
Software

- EDID Program
- EDID File (*.ini)

Hardware

- Projector
- Power Cord for Projector (42.53506G002)
- VGA Cable (42.87305G102)
- HDMI(M) to DVI(F) Adapter (42.82B13G001)
- DVI Cable (42.83N06G001)
- Generic Fixture (80.00001.001) for EDID Key-in (Fixture: JP3 must be closed)
- RS-232 9 Pin Cable (pin to pin, F-M) (42.83C07G001)
- Power Adapter (47.57803G001)
- Monitor
- PC

6-3 Setup Procedure (VGA IN 1 & VGA IN 2)



1. Connect all ports

   (1) Connect P1 of fixture with COM Port of PC/Laptop by RS232 Cable.

   (2) Connect P2 of fixture with VGA IN 1 / VGA IN 2 Port of projector by VGA Cable.

   (3) Plug Power Adapter to JP2 of fixture.

   (4) Plug Power Cord to projector.

Note: - You must confirm that the JP3 is closed in all procedure.

- The EDID Upgrade procedure of VGA IN 2 port is the same as VGA IN 1 port, we take VGA IN 1 port as an example here.

6-4 EDID Key-In Procedure (VGA)

1. Execute EDID Program

   - Double click "EDID" to execute EDID program.

2. Process

   (1) Select the COM Port which you are using.

   (2) Click "Model".

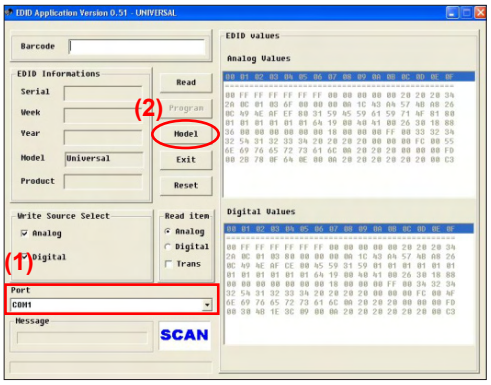
   (3) Select the EDID file (*.ini).

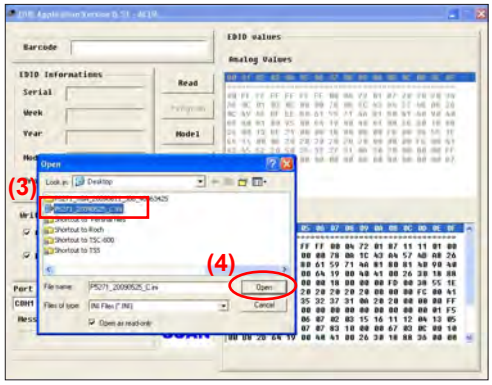
   (4) Click "Open".

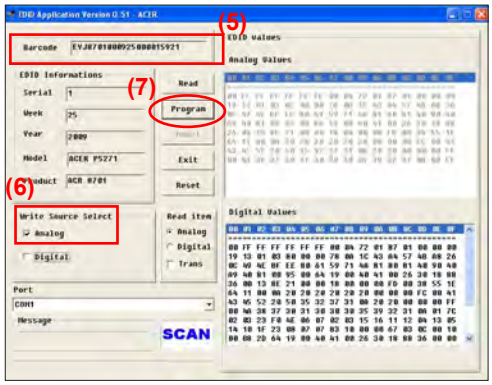
   (5) Key in the Serial Number into the Barcode blank space.

   (6) In "Write Source Select" item, select "Analog".

   (7) Click "Program".

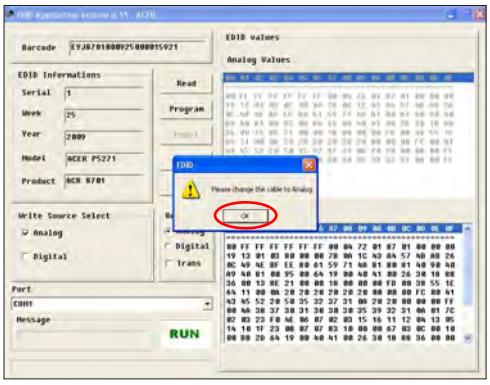




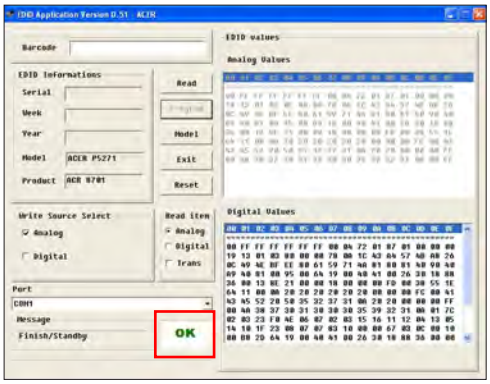


3. Change the cable to Analog

- When the message "Please change the cable to Analog" appears on the screen, click "OK".

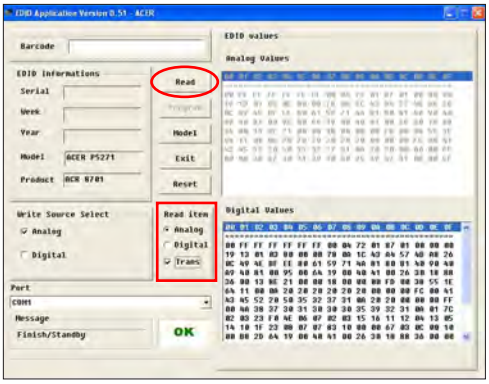


4. When the EDID program is completed, a message "OK" will appear on the screen.

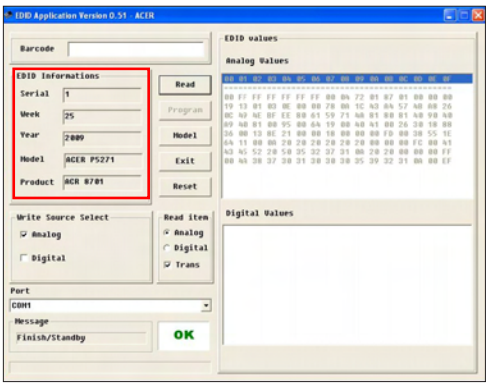


5. Read EDID "Analog" information

- In "Read item", select "Analog" and "Trans", then click the "Read".



6. EDID information will show the result.



6-5 Setup Procedure (DVI & HDMI)

1. Connect all ports

   (1) Connect P1 of fixture with COM Port of PC/Laptop by RS232 Cable.

   (2) Connect P3 of fixture with DVI / HDMI Port of projector by DVI Cable.

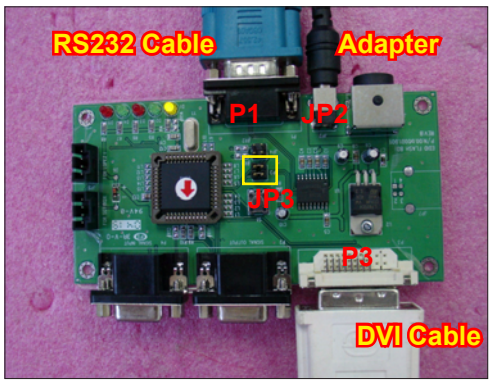
   (3) Plug Power Adapter to JP2 of fixture.

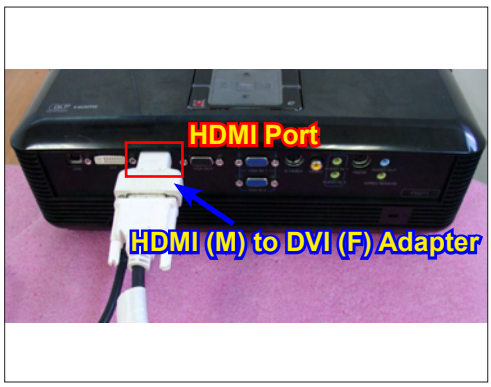
   (4) Power on fixture.

   (5) Plug Power Cord to projector.

Note: - You must confirm that the JP3 is closed in all procedure.

- The EDID Upgrade procedure of HDMI port is the same as DVI port, we take DVI port as an example here.

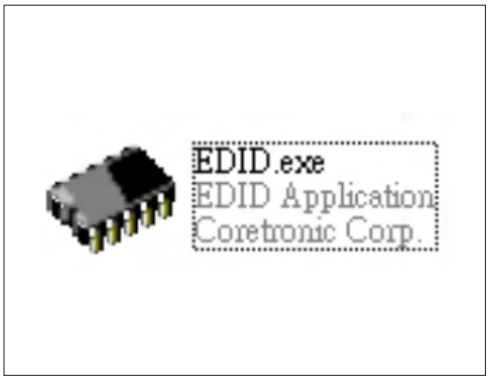




6-6 EDID Key-In Procedure (DVI)

1. Execute EDID Program

   - Double click "EDID" to execute EDID program.



2. Process

   (1) Select the COM port which you are using.

   (2) Click "Model".

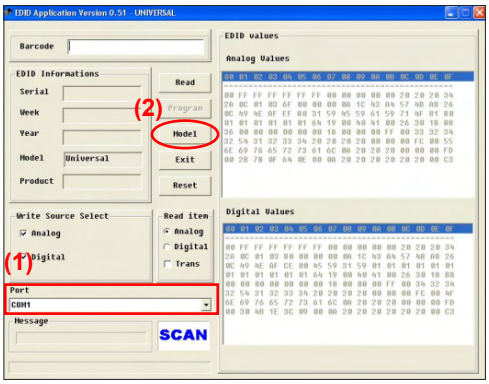
   (3) Select the EDID file (*.ini).

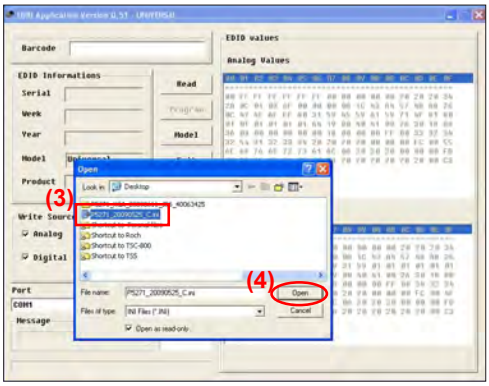
   (4) Click "Open".

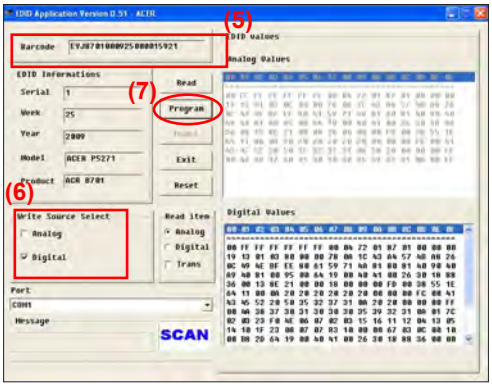
   (5) Key in the Serial Number into the Barcode blank space.

   (6) In "Write Source Select" item, select "Digital".

   (7) Click "Program".

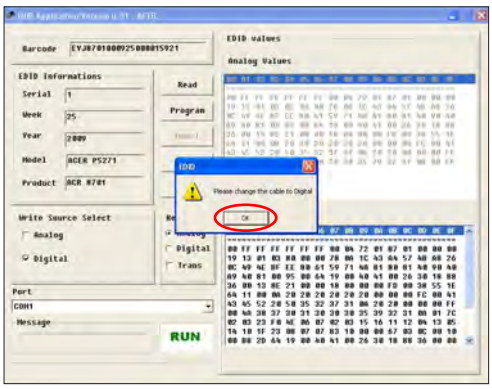




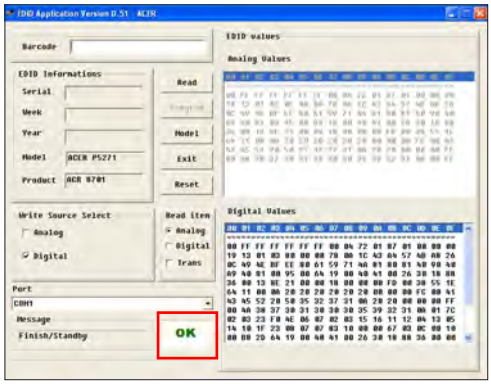


3. Change the cable to Digital

- When the message "Please change the cable to Digital" appears on the screen, click "OK".

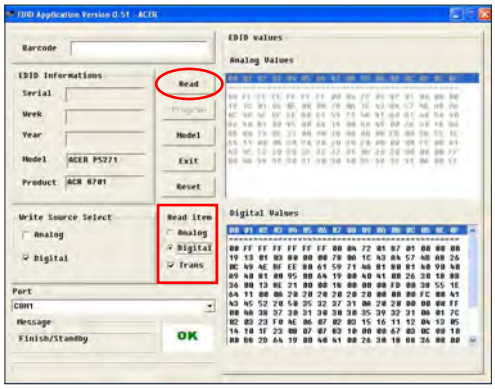


4. When the EDID program is completed, a message "OK" will appear on the screen.

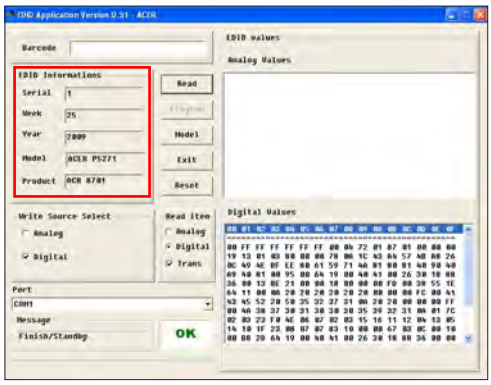


5. Read EDID "HDMI" information

- In "Read item", select "Digital" and "Trans", then click the "Read".



6. EDID information will show the result.



6-7 Un-lock SNID and Default Language Reset

- Plug in power cord.

- Hold on the "down" button, then press the "Power" button.

Note: - After about 2 seconds, the Power LED lights blue, the Lamp LED and Temp LED light red, then loosen the "Down" button.

- After that, please check the LED status and judge the actions as the following table:

Power LED Status	Result
Power (blue) + Temp (red) + Lamp (red)	OK
Power (blue) + Temp (red)	Fail

Note: If it is fail, please do the actions as above steps.

S/N General rule:

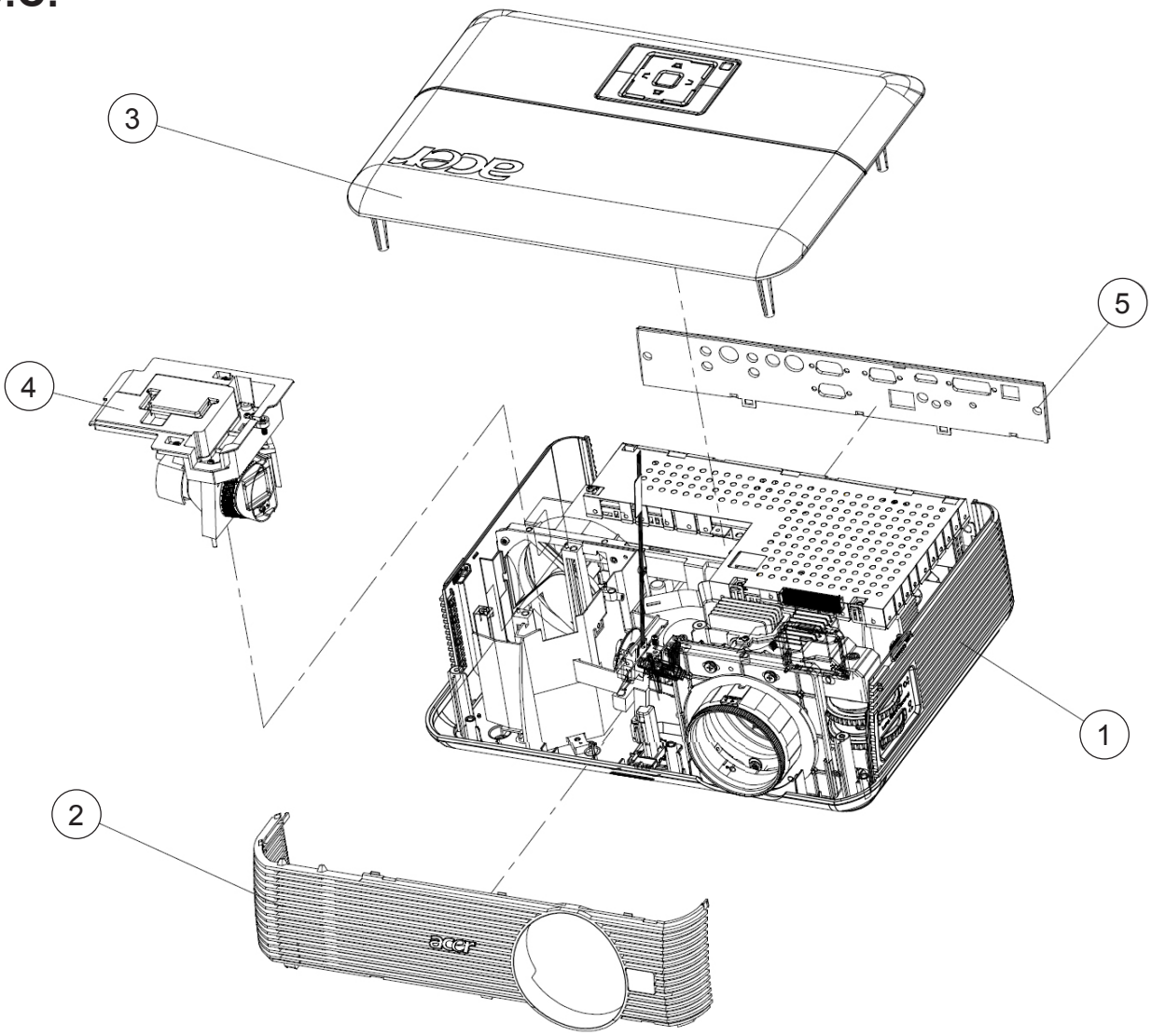
Use the last 1 digit code (as red word) for language information

Language Code (F)	Default Language
1	English
2	Thailand
3	Japan
4	TC
5	SC
6	Russian
7	Germany
8	Hungarian

Appendix A (Exploded Image)

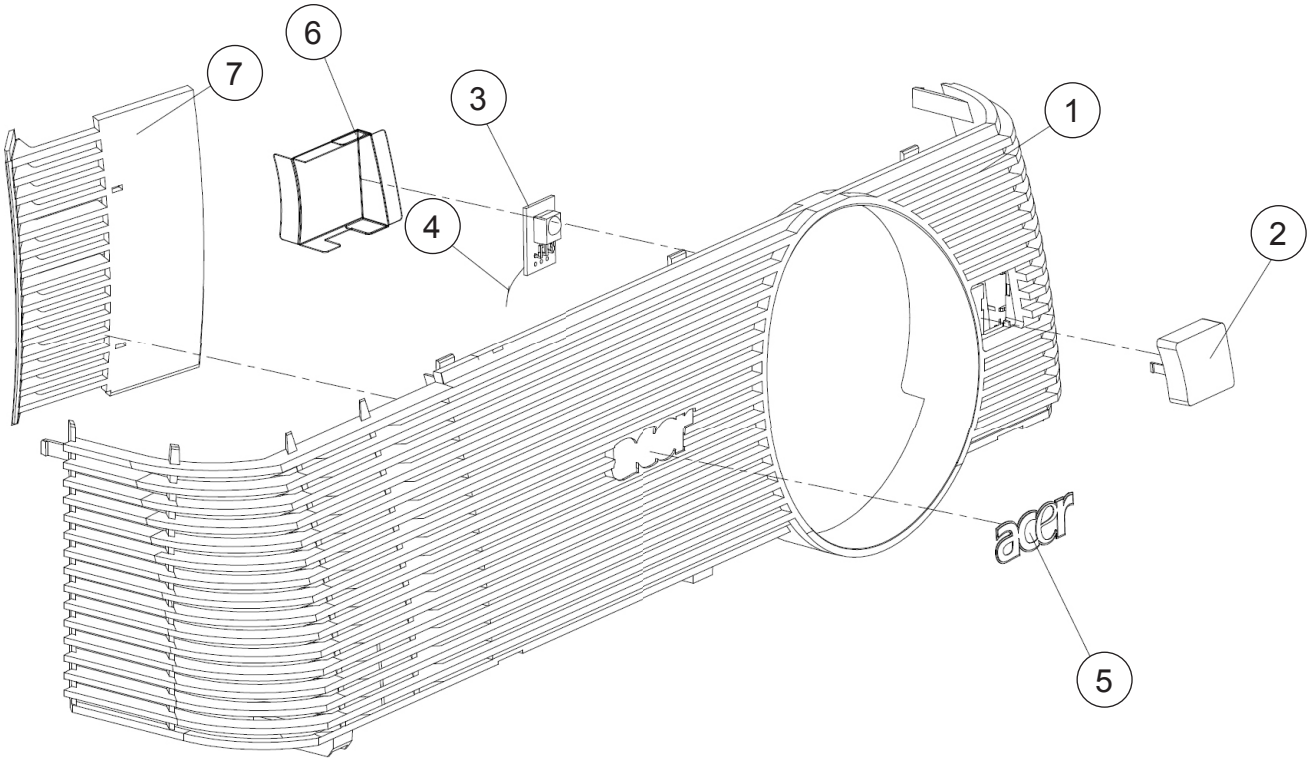
Note: This chapter is only designed to show the exploded image of the projector. For updated part numbers, please refer to RSPL report.

D.C.



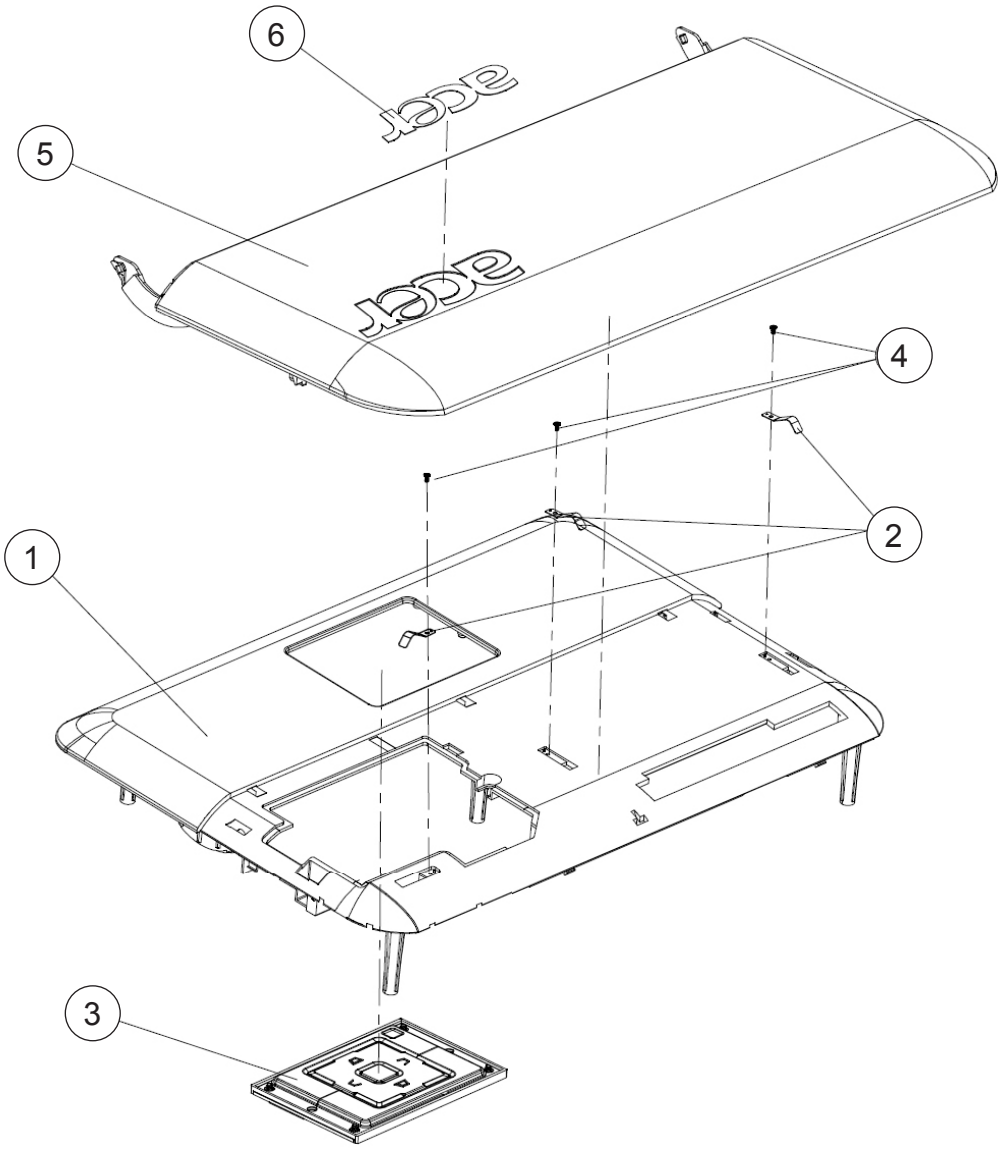
Item	P/N	Description	Parts Supply
1	70.8EP03G001	ASSY BOTTOM HOUSING MODULE P5290	
2	70.8BV02G001	FRONT COVER MODULE P5271	
3	70.8BV03G001	TOP COVER MODULE P5271	
4	SP.8BV01GC01	LAMP MODULE FOR PROJECTOR P5271/P5271i	V
4	SP.8EP01GC01	LAMP MODULE FOR PROJECTOR P5290/P5390W	V
	70.8BV40GR01	ASSY BACK COVER MODULE P5271(SERVICE)	V
	70.8EP10GR01	ASSY BACK COVER MODULE P5290(SERVICE)	V
5	51.8BV15H001	BACK COVER P5271	

ASSY FRONT COVER MODULE



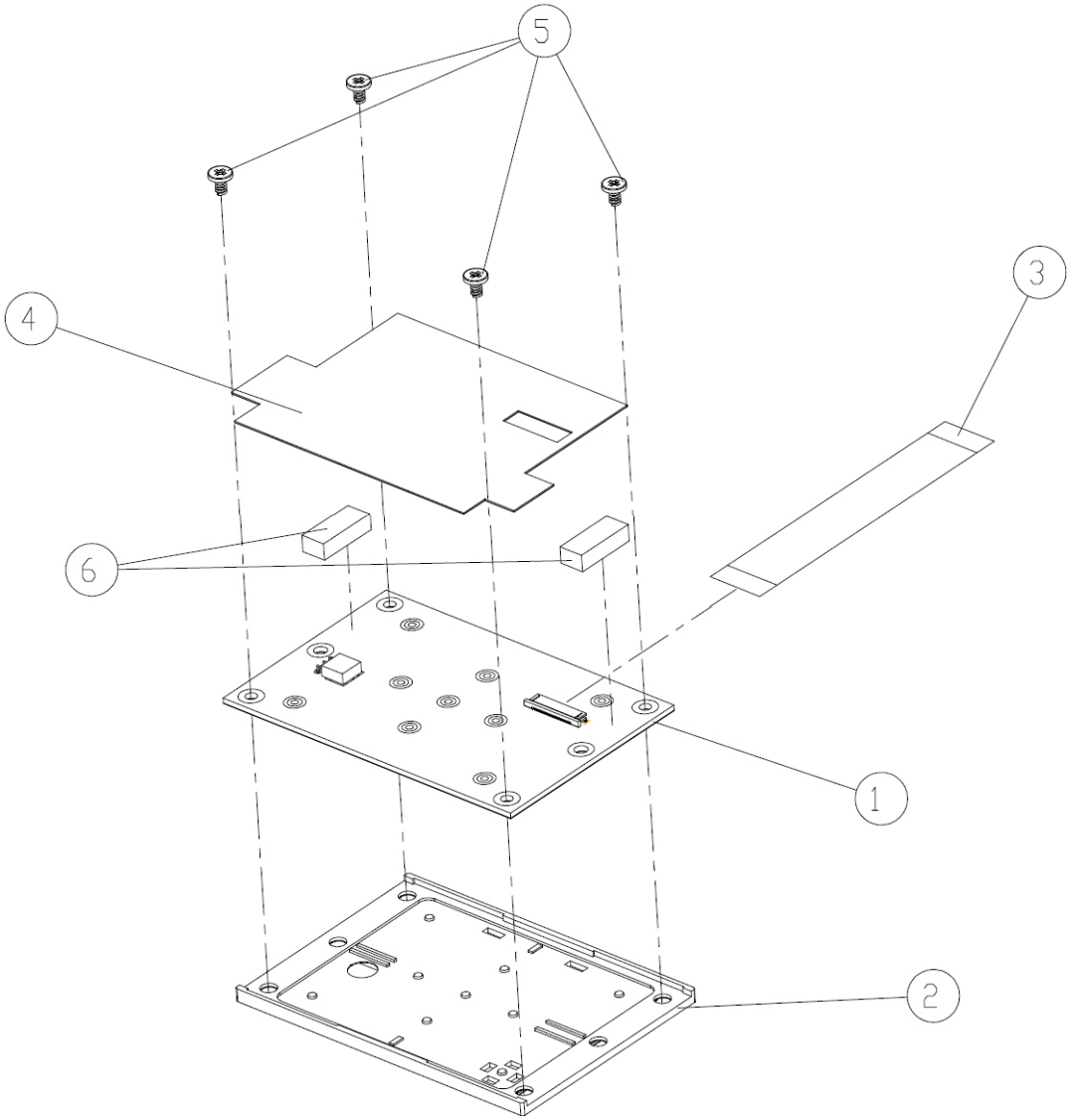
Item	P/N	Description	Parts Supply
	70.8BV44GR01	ASSY FRONT COVER MODULE P5271(SERVICE)	V
1	75.8BV08G002	ASSY FRONT COVER P5271i	
2	51.8BV12H001	FRONT IR LENS P5271	
3	80.8BV05G001	PCBA IR BD FOR P5271	
4	42.85E04G001	W.A. 3P #28 L230mm WITH L165mm GASKET IR RECEIVER DV11	
5	61.8BV11H001	ACER LOGO FRONT P5271	
6	51.8BV11G002	FRONT IR MYLAR P5271i	
7	51.8BV24H001	FRONT LIGHT CUT P5271	

ASSY TOP COVER MODULE



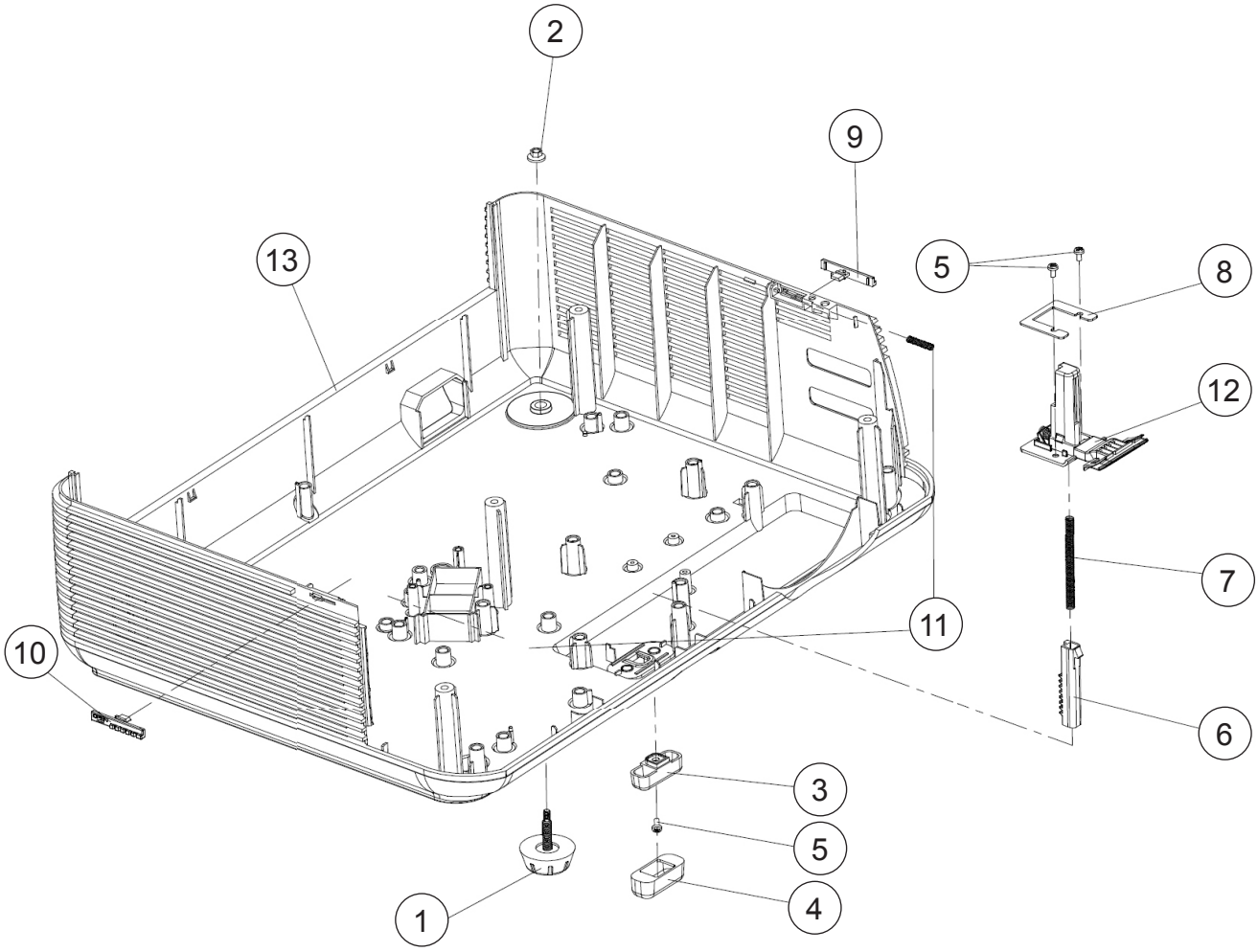
Item	P/N	Description	Parts Supply
	70.8BV45GR01	ASSY TOP&LAMP COVER MODULE P5271(SERVICE)	V
1	51.8BV10H002	TOP COVER P5271i	
2	61.8BV17H001	LAMP COVER SPRING P5271	
3	70.8BV19G001	KEYPAD MODULE P+R P5271	
4	85.YA121G030	SCREW FLAT HEAD TAP M1.7*3 Ni	
5	75.8BV05G002	ASSY LAMP COVER MODULE P5271i	
6	51.8BV21H001	ACER LOGO TOP PLASTIC P5271	

ASSY KEYPAD MODULE



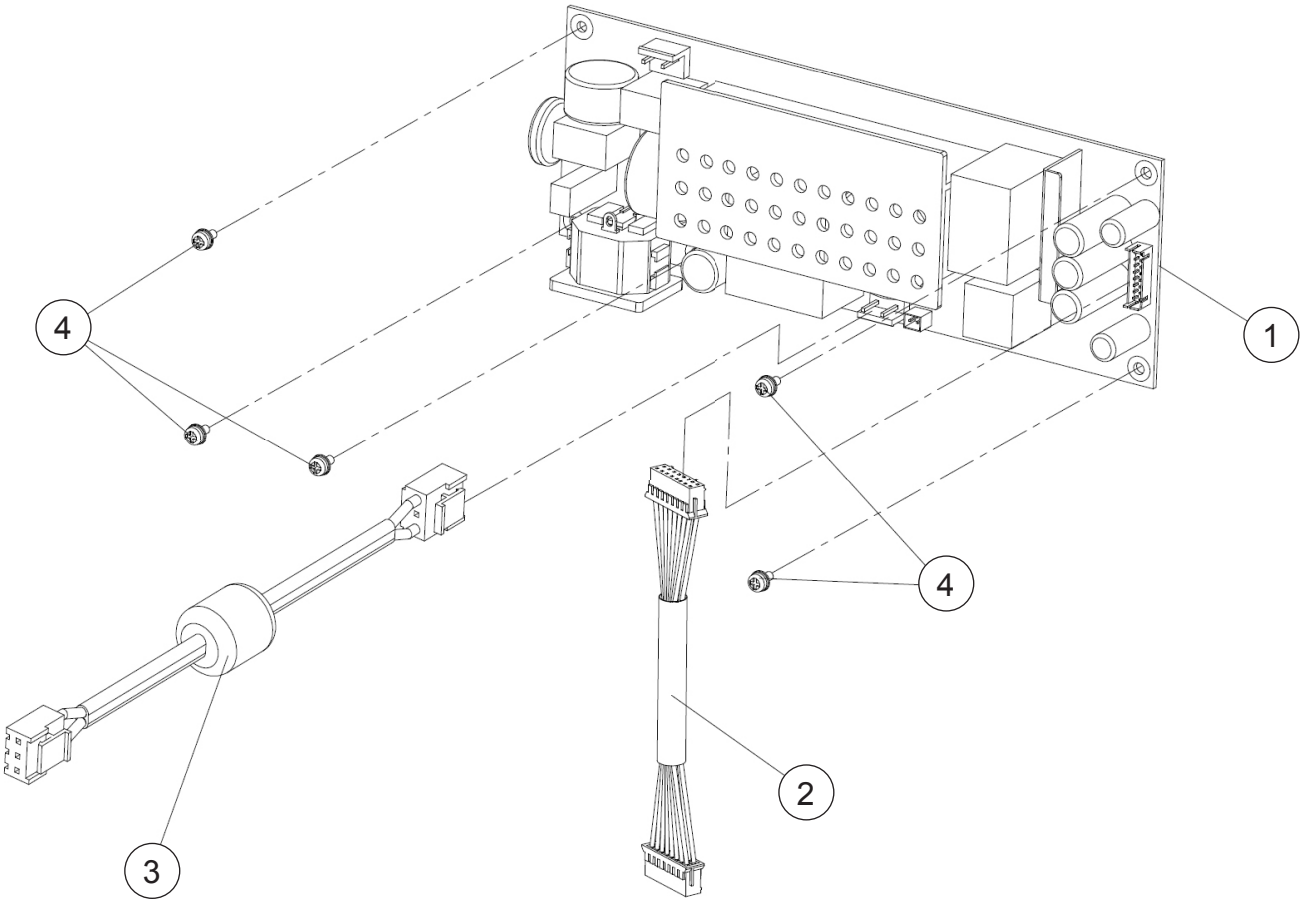
Item	P/N	Description	Parts Supply
1	80.8BV03G002	PCBA KEYPAD BD. FOR P5271	V
2	51.8BV17H002	KEYPAD MODULE P+R P5271i	
3	42.00303G001	FFC KEYPAD TO M/B 24P P=0.5 120mm EP752	V
4	51.8BV04G001	KEYPAD ISOLATED MYLAR P5271	
5	85.YA123G040	SCREW(TAPPING FLAT HEAD NI M3*4)-AD2022m	
6	41.85H06G001	EMI GASKET W10*H8*L15	

ASSY BOTTOM COVER MODULE



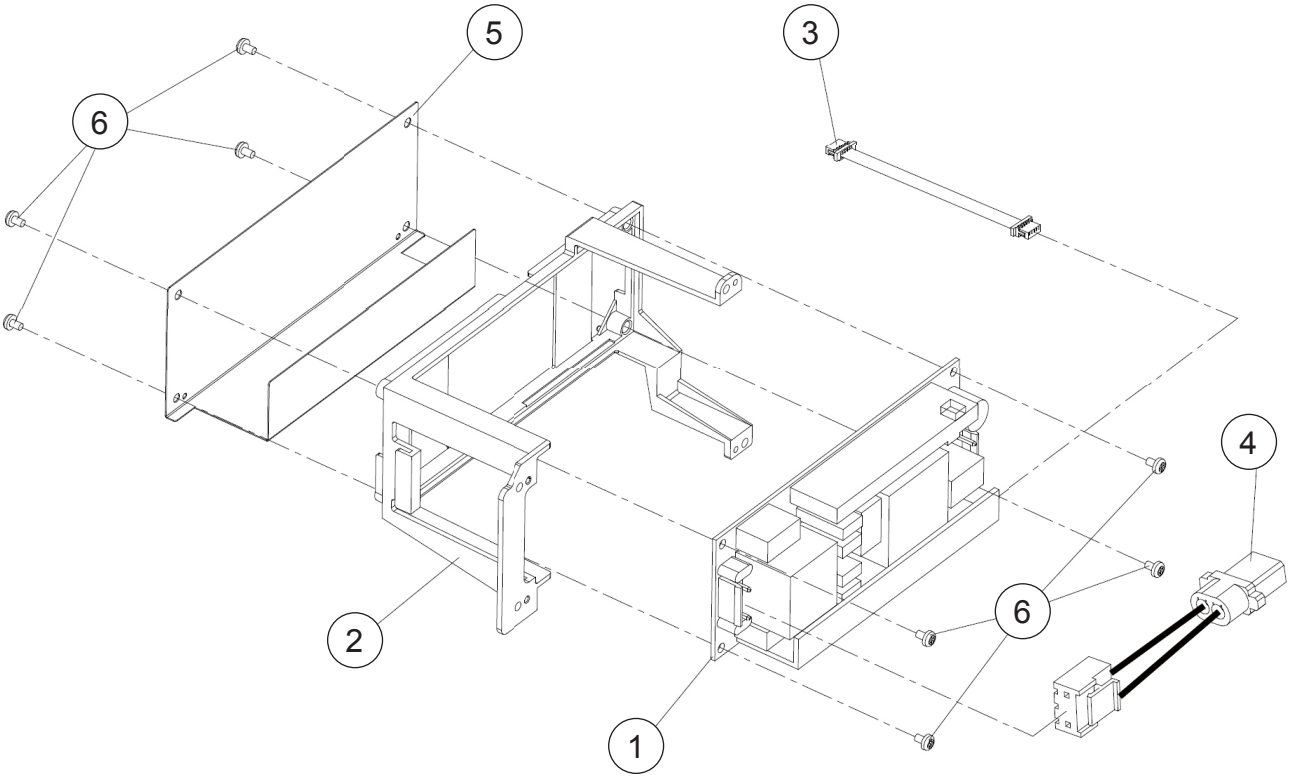
Item	P/N	Description	Parts Supply
	70.8BV41GR01	ASSY BOTTOM COVER MODULE P5271(SERVICE)	V
1	52.8BV04H001	ADJUST FOOT RUBBER P5271	
2	86.03123G035	HEX CAP HEAD NUT M3*0.5P L3.5	
3	51.8BV07H001	ELEVATOR PLASTIC FOOT P5271	
4	52.8BV02H002	ELEVATOR RUBBER FOOT P5271i	
5	85.1A126G040	SCREW PAN MECH M2.6*4 Ni	
6	51.86809G001	ELEVATOR BODY NYLON+GF PD120	
7	61.86814G001	ELEVATOR EXTEND SPRING PD120	
8	61.8BA18G001	ELEVATOR BRACKET P1266	
9	51.8BV13H002	LATCH LEFT P5271i	
10	51.8BV14H002	LATCH RIGHT P5271i	
11	61.8BV16H001	LATCH SPRING P5271	
12	70.8BV21G001	ELEVATOR MODULE P5271	
13	75.8BV06G002	ASSY BOTTOM COVER P527I	

ASSY LVPS MODULE



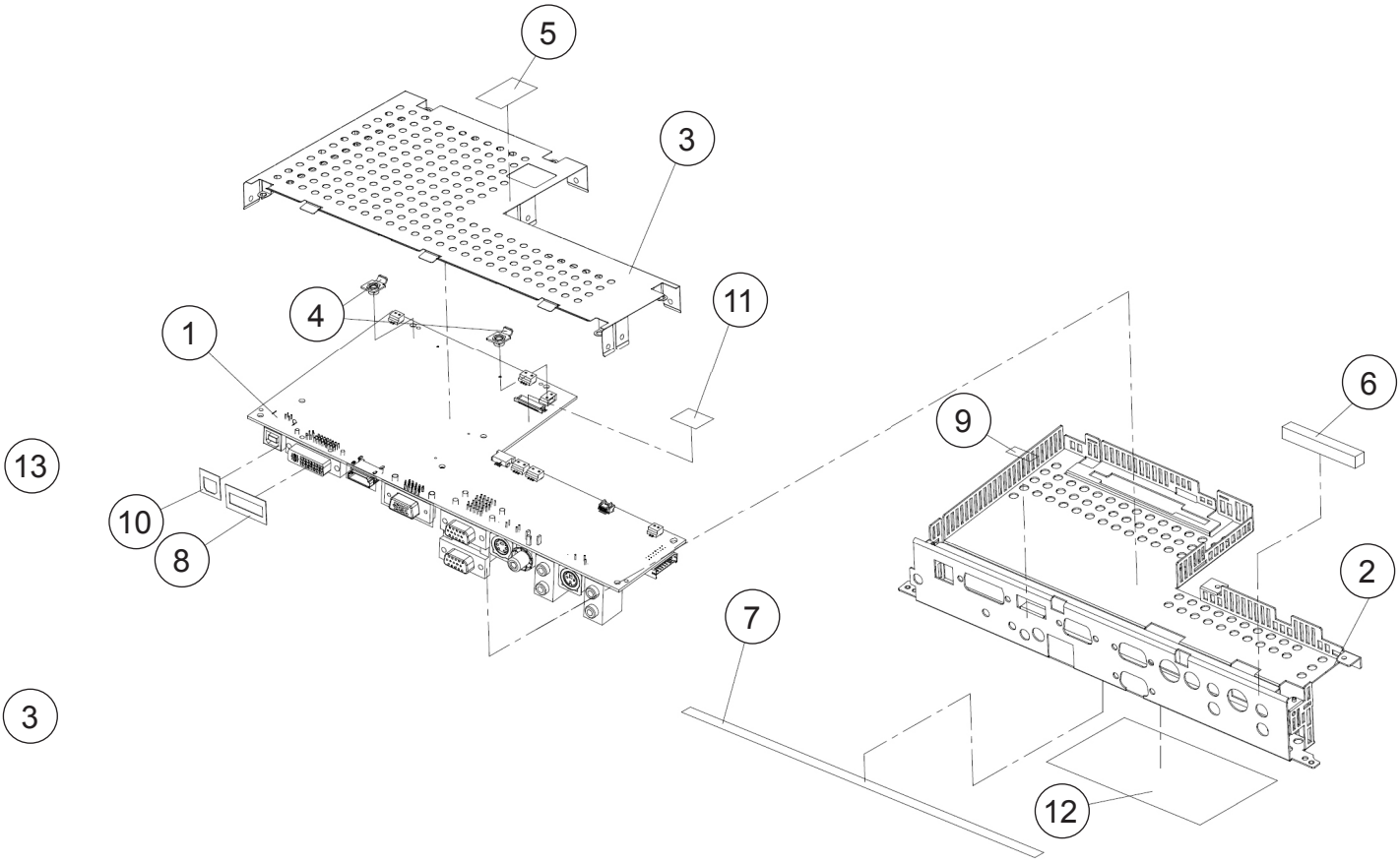
Item	P/N	Description	Parts Supply
1	75.8BV01GP01	ASSY MATRITEK 230W LVPS FOR P5271. STAND-BY<1W (P5271)	V
1	75.8BV02GP01	ASSY MATRITEK 280W LVPS .STAND-BY<1W (P5290/P5390W)	V
2	42.00451G001	W.A. 16P 240mm LVPS TO MAIN BD UL1007 EP752	V
3	42.83M06G001	CABLE W.A. 2P #20 180mm LAMP DRIVER TO LVPS 2400MP	V
4	85.1F123G060	SCREW PAN MECH W/SF M3*6 Ni GREEN	

ASSY LAMP DRIVER MODULE



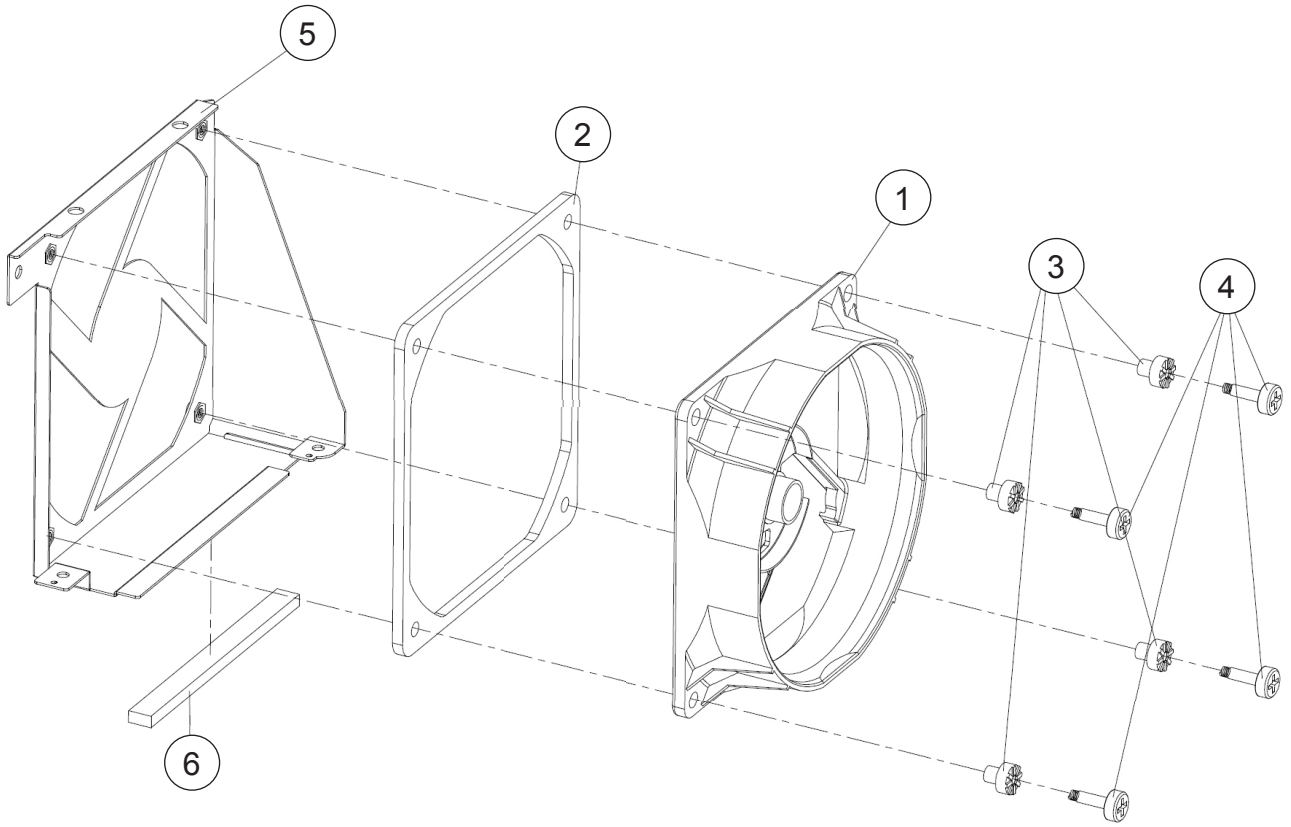
Item	P/N	Description	Parts Supply
1	75.8BW01G002	ASSY OSRAM LAMP DRIVER O3 MID 230W(Gen5_Panyu+E20.8) (P5271)	V
1	75.8EP01G001	ASSY OSRAM O3 PRO Lamp Driver (CODE: A61494F00DG) (P5290/P5390W)	V
2	51.8BV04H001	LAMP DRIVER HOLDER P5271	
3	42.00425G001	W.A. 5P #28 100mm MAIN BOARD/LAMP DRIVER 1409X	V
4	42.0043MG001	LAMP CONNECTOR SOCKET P5271	
5	51.8BV01G001	LAMP DRIVER ISOLATED MYLAR P5271	
6	85.1A123G040	SCREW PAN MECH M3*4 Ni	

ASSY MAIN BOARD MODULE



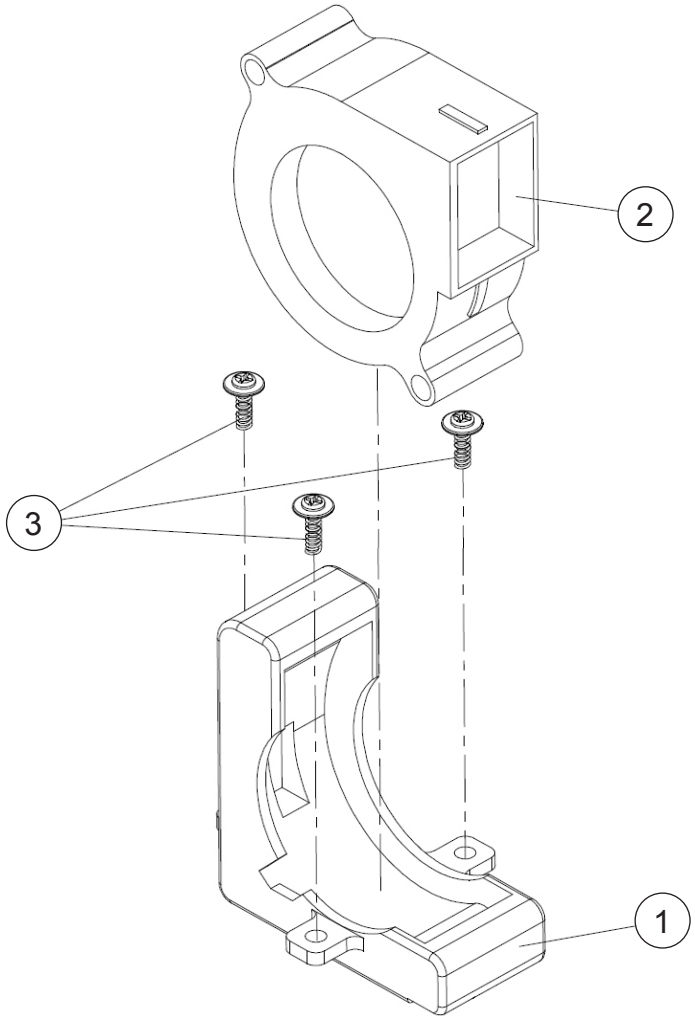
Item	P/N	Description	Parts Supply
	70.8BV39GR01	ASSY MAIN BOARD MODULE P5271(SERVICE)	V
	70.8EP09GR01	ASSY MAIN BOARD MODULE P5290(SERVICE)	V
1	80.8EP01G001	PCBA MAIN BD FOR P5290	
2	61.8BV06H002	MAIN BOARD SHIELDING BOTTOM P5271i	
3	61.8BV07H001	MAIN BOARD SHIELDING TOP P5271	
4	61.8BV15H001	MAIN BOARD SHIELDING BOTTOM BRACKET P5271	
5	51.81541G001	TAPE 3M J350 17*30mm	
6	41.83R07G001	EMI GASKET W7*H7*L50mm	
7	41.83J02G001	EMI GASKET W5*H1.0*L245mm PD527	
8	41.81H03G001	EMI GASKET FOR DVI CONNECTOR	
9	41.83J07G001	EMI TAPE W5*H1.0*L11mm PD527	
10	41.82G03G001	EMI GASKET USB CONNECTOR EP719	
11	51.81542G001	TAPE 3M J350 17*15mm	
12	51.81542G001	TAPE 3M J350 17*15mm	
13	41.89K06G001	EMI TAPE W50*L120	

ASSY FAN MODULE



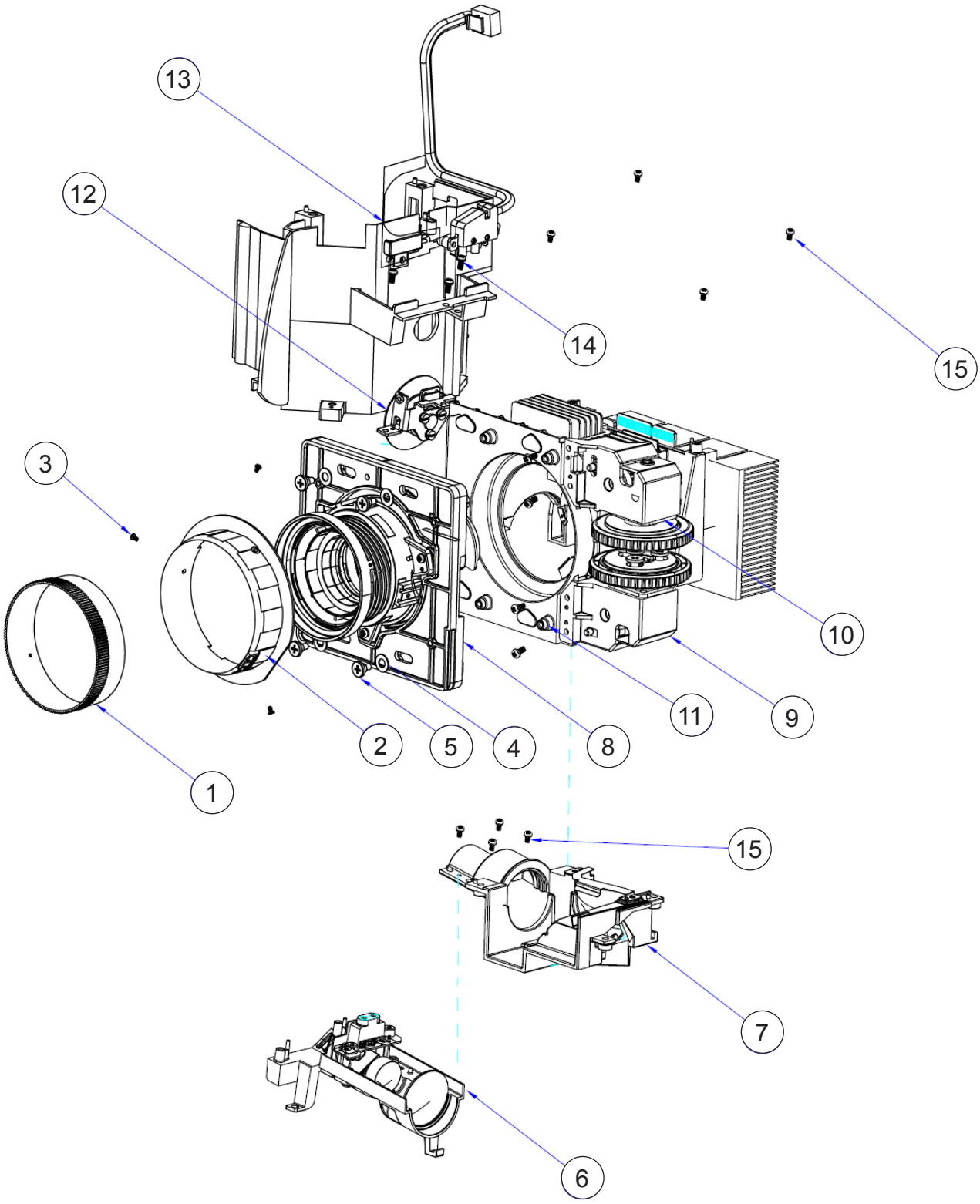
Item	P/N	Description	Parts Supply
1	49.83C04G001	SUNON 9225 AXIAL FAN/KDE1209PTBX	V
2	52.8BV06H001	FAN 9225 RUBBER BOTTOM P5271	
3	52.L1309G002	FAN 9225 RUBBER TOP FOR PD726	
4	61.89547G001	92*25 FAN SCREW M2.6 4100MP	
5	61.8BV05H001	FAN 9225 BRACKET P5271	
6	41.8AV01G001	EMI GASKET W6*H3*L50	

ASSY BLOWER FAN MODULE



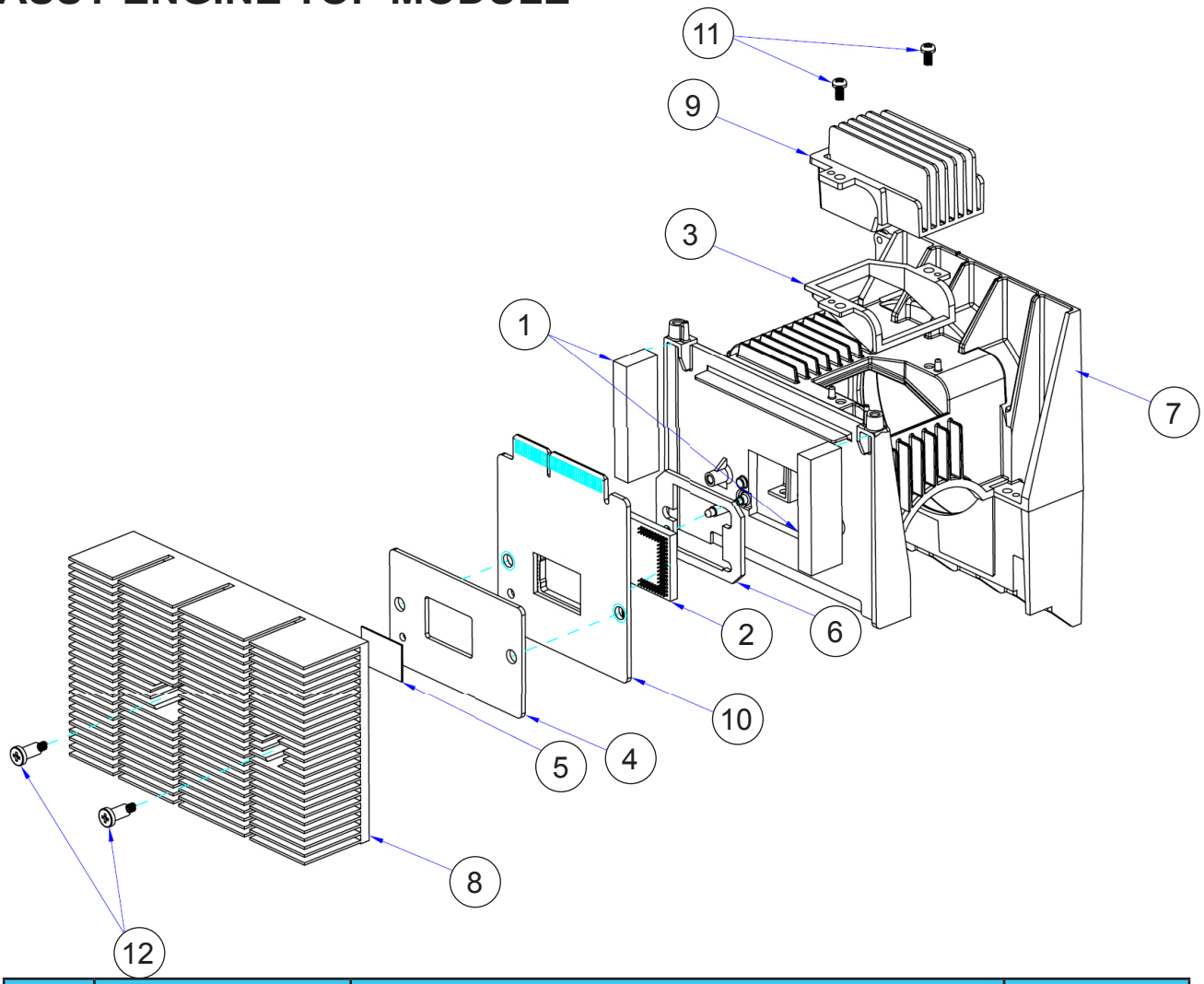
Item	P/N	Description	Parts Supply
1	52.87306G001	RUBBER BLOWER FAN FRAME 2100MP	
2	49.8BY01G001	SUNON 50*50*20mm BLOWER GB1205PKV4-AY S76.F.X.GN	V
3	85.WD123G080	SCREW PAN TAP 3*8 W/WASHER Ni	

ASSY ENGINE MODULE



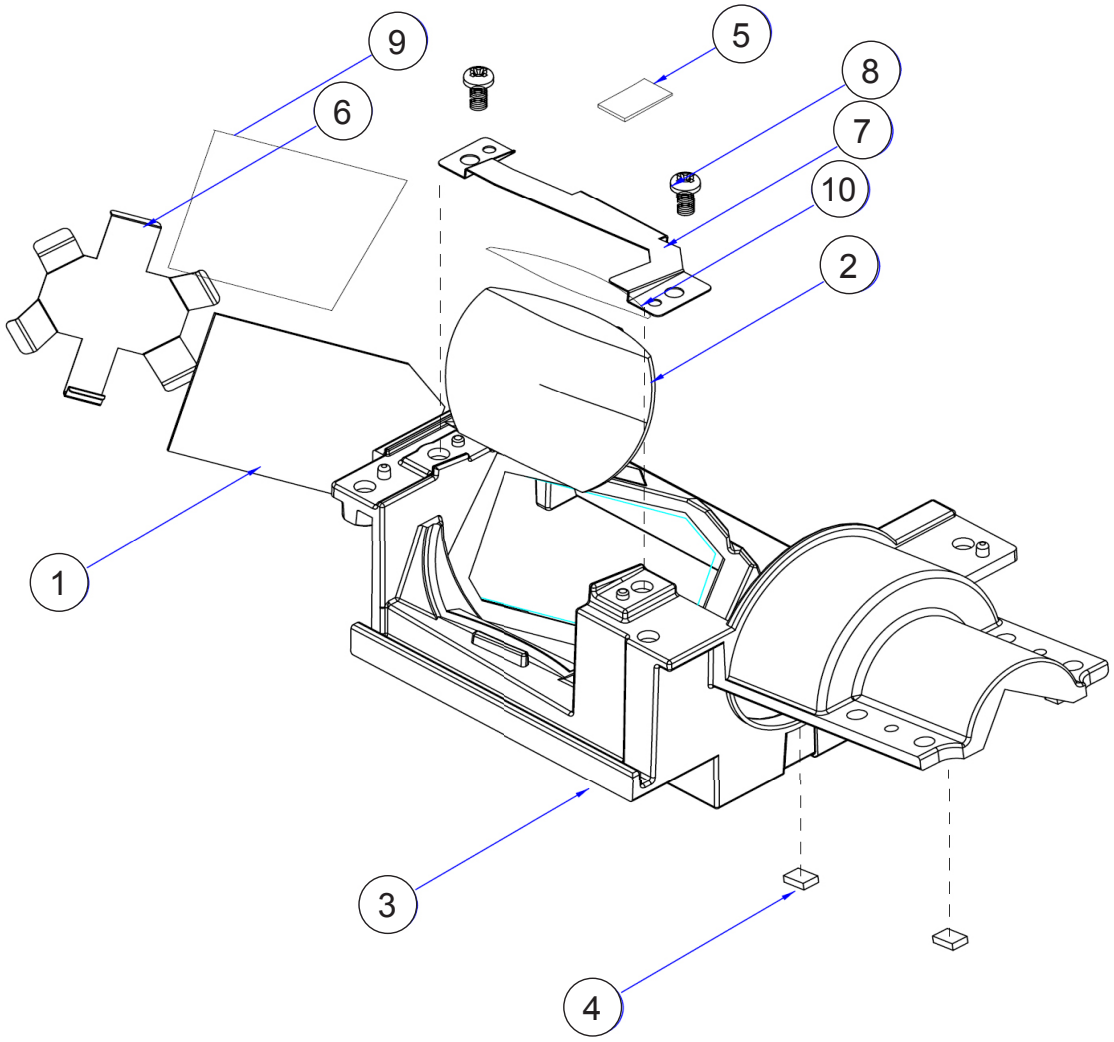
Item	P/N	Description	Parts Supply
1	51.8BV02H001	FOCUS RING P5271	
2	51.8BV01H001	ZOOM RING P5271	
3	85.WA122G040	SCREW PAN TAP M2*4 NI	
4	51.8AF12G001	PLASTIC WASHER NWT-38 PINGOOD	
5	61.8AF30G001	SHOULDER SCREW M3.0*7 VP22	
6	70.8BV24G001	ASSY ENGINE BRIDGE MODULE P5271	
	70.8BV42GR01	ASSY ENGINE MODULE P5271(SERVICE)	V
7	70.8BY13G001	ASSY ENGINE BOTTOM MODULE EX765	
8	70.8BY17G001	ASSY LENS SHIFT MODULE EX765	
9	70.8BV27G001	ASSY LENS SHIFT GEAR H P5271	
10	70.8BV28G001	ASSY LENS SHIFT GEAR V P5271	
11	70.8BV29G001	ASSY ENGINE TOP MODULE P5271 Z20	
12	70.8EP02G001	COLOR WHEEL MODULE P5290	
13	70.8BV32G001	ASSY LAMP SUPPORT HOLDER 230W P5271	
14	85.1A626G050	SCREW PAN MECH M2.6*5 BLACK NYLOK	
15	85.1A326G060	SCREW PAN HEAD MECH M2.6*6 BLACK	

ASSY ENGINE TOP MODULE



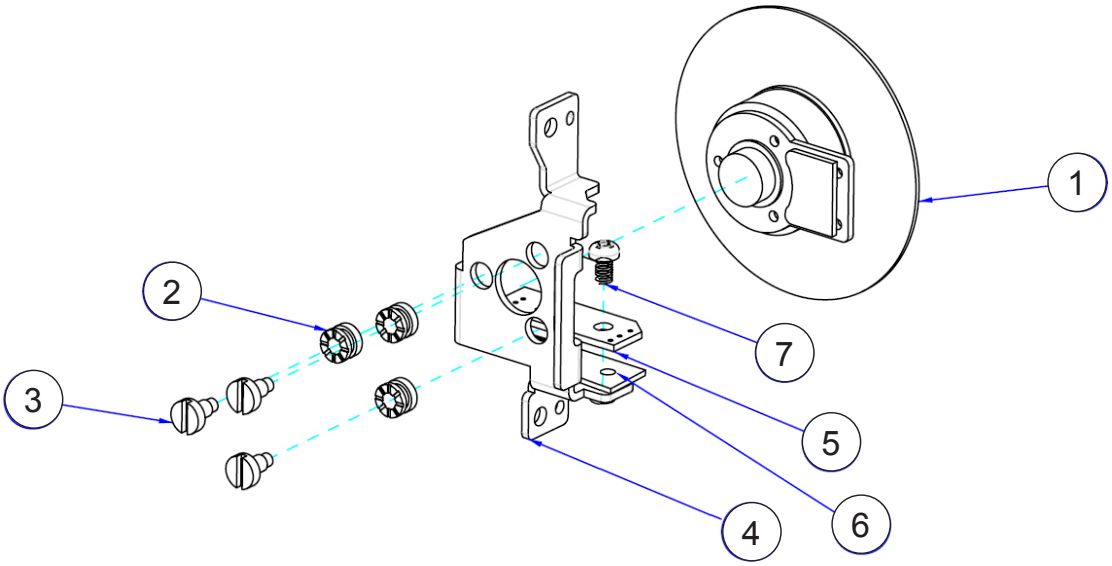
Item	P/N	Description	Parts Supply
1	41.8BV01G001	EMI GASKET W6*H13*L40	
2	48.8CQ01G003	0.55” XGA 2xLVDS SERIES 450 DMD -8 TI 1076-603cB	V
2	48.8EJ01G001	0.65” WXGA 2xLVDS SERIES 450 DMD -8 TI 1280-603cB	V
3	52.8BY01G001	ENGINE OFF LIGHT HEATSINK SILCONE RUBBER X20/A20	
4	52.8CP02G001	DMD BOARD RUBBER X1161	
5	52.8CP04G001	S450 0.55” XGA/SVGA DMD thermal pad, FUJIPOLY, Sarcon XR-HE, 18.4x12.5x0.5 mm	
6	52.8CP01G001	DMD RUBBER X1161	
7	61.8BY01G021	ENGINE TOP COVER Mg Z20	
8	61.8BV27H001	ENGINE HEATSINK Z20 P5271	
9	61.8BY03G001	ENGINE OFF LIGHT HEATSINK AL X20/A20	
10	80.8BV02G002	PCBA DMD BOARD FOR P5271(S450)	V
11	85.1A326G060	SCREW PAN HEAD MECH M2.6*6 BLACK	
12	85.4A826G118	STEP SCREW FOR TYPEX DMD M2.6*11.8mm,X15	V

ASSY ENGINE BOTTOM MODULE



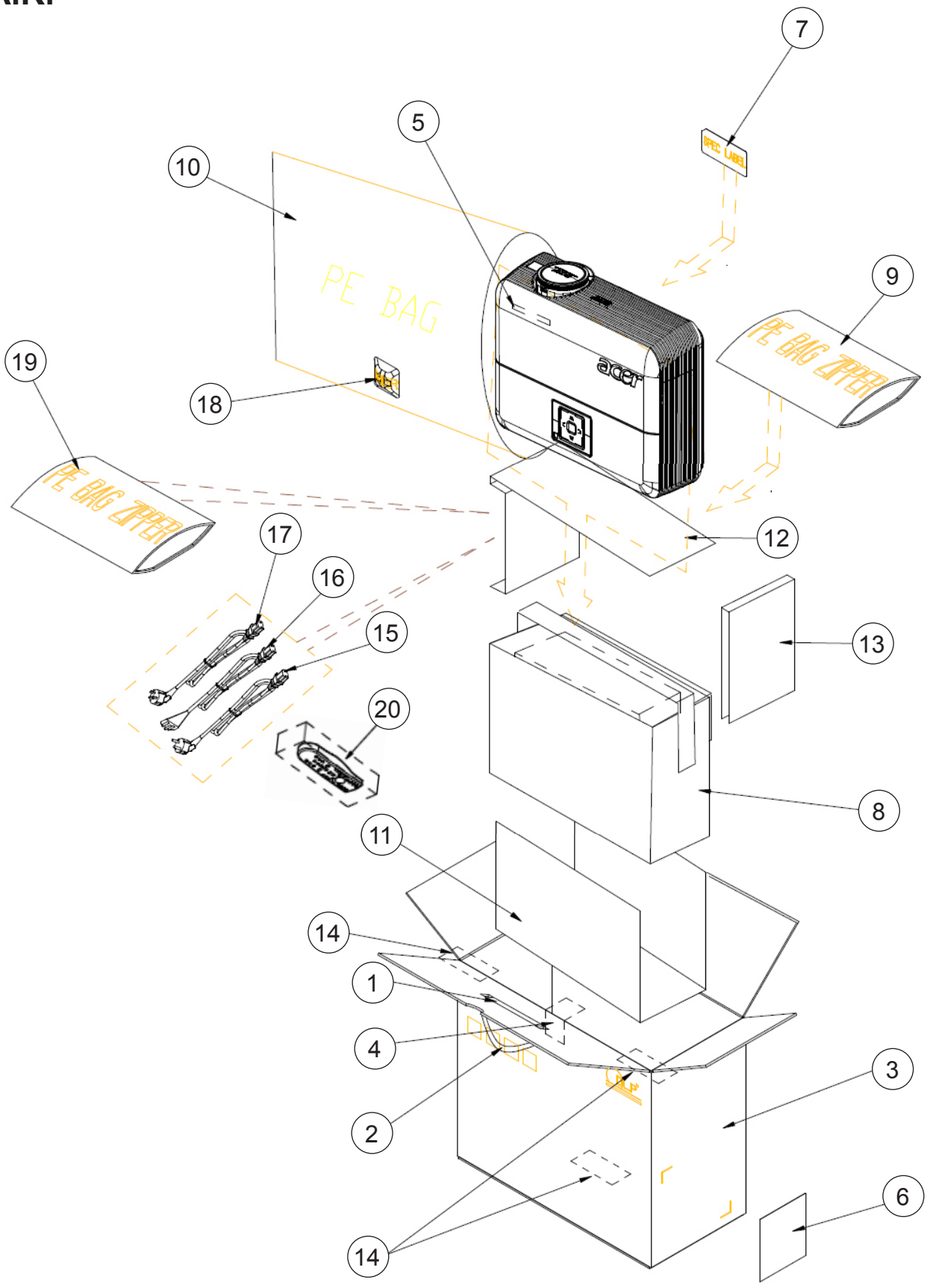
Item	P/N	Description	Parts Supply
1	23.8BV02G001	ONE SURFACE COATING 37.2 x 23.2 mm FOR X20	
2	23.8BV06G001	ASPHERICAL GLASS RELAY X20 L1. ψ36.5 mm	
3	51.8BY01G001	ENGINE BOTTOM BMC X20/A20	
4	52.85808G001	PORON-LENS BLACK XB31	
5	52.8BY03G001	ENGINE BOTTOM MIRROR SPONGE HT800 X20/A20	
6	61.8BY08G001	ENGINE MIRROR SPRING SUS301 X20/A20	
7	61.8BY10G001	ENGINE RELAY FIXED PLATE SUS301 X20/A20	
8	85.1A626G050	SCREW PAN MECH M2.6*5 BLACK NYLOK	
9	51.8BY31G001	MIRROR MYLAR EX765	
10	51.8BY37G001	ENGINE RELAY MYLAR X20/A20	

ASSY COLOR WHEEL MODULE



Item	P/N	Description	Parts Supply
1	23.8CQ19G002	YO 6S HE3 CW R81Y41G84C31W52B71, URD20 MOTOR	
	70.8BV43GR01	ASSY COLOR WHEEL MODULE P5271(SERVICE)	V
2	52.83615G001	COLOR WHEEL DISC RUBBER, EzPro755	
3	61.83628G002	COLOR WHEEL SHOULDER SCREW NICKEL M2*4.8 FILLIST	
4	61.8BY09G001	ENGINE COLOR WHEEL HOLDER SECC X20/A20	
5	80.8AA04G001	PCBA PHOTO SENSOR BOARD FOR 1409X	
6	51.8BY35G001	COLOR WHEEL PHOTOSENSOR MYLAR FOR EX765	
7	85.1A626G040	SCREW PAN MECH M2.6*4 BLACK NYLOK	

A.K.


7
SPEC LABEL
5
10
PE BAG
9
PE BAG ZIPPER
19
18
PE BAG ZIPPER
12
17
16
15
13
20
8
11
14
1
4
3
2
6
14

Item	P/N	Description	Parts Supply
1	51.00201G001	HANDLE BAR 1.PE HD70	
2	51.00200G001	HANDLE BAR 2. PE HD70	
3	55.8BV02H001	CARTON CARRY BOX P5271	
4	35.82V02G001	LABEL CARTON(SEAL) 110*50mm PD120	
5	51.8BV15G001	TOP COVER MYLAR P5271	
6	35.52302G091	LABEL CARTON 108*92 BLANK	V
7	35.86301G001	SPEC LABEL BLANK PD120	V
8	53.8BV01G001	SOFT CARRY BAG P5271	
9	70.8BV25G001	ASSY AK PACKAGE MODULE 1 P5271	
10	51.52109G003	PE BAG 450*350*0.07 FOR OPTOMA	
11	56.8BV02H001	AIR BAG TOP P5271	
12	56.8BV02H001	AIR BAG TOP P5271	
13	56.8BV03H001	AIR BAG RIGHT P5271	
14	35.00029G001	ACER TAPE 45M FOR CARTON	
15	42.00120G011	CABLE POWER CORD 1.8M SP-023/IS-14 EUROPE DIS-WARNING LABEL	
16	42.00110G011	CABLE POWER CORD 1.8M SP-60/IS-14 UK DIS-WARNING LABEL	V
17	42.00131G011	CABLE POWER CORD 1.8M SP-027/IS-14 SWITZER-LAND DIS-WARNING LABEL	V
18	57.00001G001	PACK SIO2 DRIER 20g	
19	70.8BV26G001	ASSY AK PACKAGE MODULE 2 P5271	
20	45.8BV01G001	INFRARED REMOTE CONTROLLER L9 WITH LASER Silver-grey For	V

Appendix B

I. Serial Number System Definition

Serial Number Format for Projector (take P5271 for example)

EYJ8701001 929 00000 59 0 1

① ② ③ ④ ⑤ ⑥

① : **EYJ8701001 = Part Number**

② : **929 = Date Code (ex:2009 = 9, the twenty-ninth week of the year = 29)**

③ : **00000 = Serial Numbers**

④ : **59 = Manufacturing Code**

⑤ : **0 = Version Code**

⑥ : **1 = Auto-Language Code**

EX: EYJ8701001929000005901

This label represents the serial number for P5271. It is produced at CPC on twenty-ninth week of 2009. Its serial code is 00000.

II. PCBA Code Definition

PCBA Code for Projector

A	B	XXX	XXXXXXXXX	CC	XXX	EEEE
①	②	③	④	⑤	⑥	⑦

① : ID

② : Vendor Code

③ : Firmware Version

④ : P/N

⑤ : MB version

⑥ : Date Code

⑦ : S/N

Appendix C

RS232 function command summary table

General command type (Projector "receives" commands)

No	Code (character)	Function feature
1	OKOKOKOKOK\r	Power On
2	* 0 IR 001\r	Power On
3	* 0 IR 002\r	Power Off
4	* 0 IR 004\r	Keystone
5	* 0 IR 006\r	Mute
6	* 0 IR 007\r	Freeze
7	* 0 IR 008\r	Menu
8	* 0 IR 009\r	Up
9	* 0 IR 010\r	Down
10	* 0 IR 011\r	Right
11	* 0 IR 012\r	Left
12	* 0 IR 014\r	Re-Sync
13	* 0 IR 015\r	Source Analog RGB for D-sub
14	* 0 IR 016\r	Source Digital RGB
15	* 0 IR 017\r	Source PbPr for D-sub
16	* 0 IR 018\r	Source S-Video
17	* 0 IR 019\r	Source Composite Video
18	* 0 IR 020\r	Source Component Video
19	* 0 IR 021\r	Aspect ratio 16:9
20	* 0 IR 022\r	Aspect ratio 4:3
21	* 0 IR 023\r	Volume +
22	* 0 IR 024\r	Volume –
23	* 0 IR 025\r	Brightness
24	* 0 IR 026\r	Contrast
25	* 0 IR 027\r	Color Temperature
26	* 0 IR 030\r	Hide
27	* 0 IR 031\r	Source
28	* 0 IR 032\r	Video: Color saturation adjustment
29	* 0 IR 033\r	Video: Hue adjustment
30	* 0 IR 034\r	Video: Sharpness adjustment
31	* 0 IR 035\r	Query Model name

No	Code (character)	Function feature
32	* 0 IR 036\r	Query Native display resolution
33	* 0 IR 037\r	Query company name
34	* 0 IR 042\r	Keystone Up
35	* 0 IR 043\r	Keystone Down
36	* 0 IR 046\r	Zoom
37	* 0 IR 047\r	e-Key
38	* 0 IR 048\r	Color RGB
39	* 0 IR 049\r	Language
40	* 0 IR 050\r	Source HDMI

Note: The command with end "\r" means "Enter".